## SECTION 1: Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Product name</th>
<th>R-0870; R-0870-PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product number</td>
<td>DPD Powder</td>
<td></td>
</tr>
<tr>
<td></td>
<td>R-0870; R-0870-PL</td>
<td></td>
</tr>
<tr>
<td>Recommended use and restrictions</td>
<td>To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.</td>
<td></td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Taylor Technologies, Inc.</td>
<td>31 Loveton Circle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sparks, MD 21152</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phone: (410) 472-4340</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emergency phone: (800) 837-8548</td>
</tr>
</tbody>
</table>

## SECTION 2: Hazard(s) identification

| Physical hazards | Not applicable |
| Health hazards   | Eye damage/irritation | Category 2A |
|                  | Skin corrosion/irritation | Category 2 |

### Environmental hazards
Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

### Label elements
- **Hazard pictograms**
- **Signal word** Warning
- **Hazard statements** Causes serious eye irritation. Causes skin irritation.
- **Precautionary statements**
  - **Prevention** Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur. Wash skin thoroughly after handling.
  - **Response** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. IF EYE IRRITATION PERSISTS: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. IF SKIN IRRITATION OCCURS: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
  - **Storage** Keep tightly capped. Store out of direct sunlight between 36°F – 85°F.
  - **Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazards not otherwise classified
Not applicable
SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>% w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium phosphate dibasic</td>
<td>Disodium hydrogen phosphate; Disodium phosphate</td>
<td>7558-79-4</td>
<td>10–30</td>
<td></td>
</tr>
<tr>
<td>Citric acid</td>
<td>2-Hydroxypropane-1,2,3-tricarboxylic acid</td>
<td>77-92-9</td>
<td>1–5</td>
<td></td>
</tr>
<tr>
<td>Ethylenediaminetetraacetic acid disodium salt dihydrate</td>
<td>EDTA disodium dihydrate</td>
<td>6381-92-6</td>
<td>1–5</td>
<td></td>
</tr>
<tr>
<td>N,N-Diethyl-p-phenylenediamine sulfate salt</td>
<td>DPD sulfate</td>
<td>6065-27-6</td>
<td>1–5</td>
<td></td>
</tr>
<tr>
<td>Nonhazardous and other components below reportable levels</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>45–70</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: First-aid measures

**If inhaled**
Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

**In case of skin contact**
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

**In case of eye contact**
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

**If swallowed**
Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.

**Most important symptoms and effects, both acute and delayed**
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

**Indication of any immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically.

**General information**
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

**Extinguishing media**
Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**Specific hazards arising from the substance or mixture**
- **Fire hazard**: Not flammable
- **Explosion hazard**: Not explosive
- **Reactivity**: Hazardous reactions will not occur under normal conditions.
- **Hazardous combustion products**: Calcium oxides, carbon oxides, nitrogen oxides, phosphorous oxides, potassium oxides, sodium oxides, sulfur oxides. Other irritating fumes and smoke.

**Advice for firefighters**
- **Precautionary measures**: Exercise caution when fighting any chemical fire; hazardous fumes will be present.
- **Firefighting equipment/instructions**: Use water spray or fog for cooling exposed containers.
- **Protection during firefighting**: Do not enter fire area without proper protective equipment, including respiratory protection.
- **Other information**: Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

**Personal precautions, protective equipment, and emergency procedures**
Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

**Environmental precautions**
Avoid discharge into drains, watercourses, or onto the ground.
Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7:  Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe dust or mists. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8:  Exposure controls/personal protection

Occupational exposure limits

US ACGIH Threshold Limit Values
Not regulated

US NIOSH: Pocket Guide to Chemical Hazards
Not regulated

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Not regulated

Biological limit values
No biological exposure limits noted for the ingredient(s)

Exposure controls
Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment
Eye/face protection
Wear appropriate chemical safety goggles if contact is likely to occur.
Skin protection
Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection
Wear appropriate protective clothing if contact is likely to occur.
Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9:  Physical and chemical properties

Information on basic physical and chemical properties

Physical state
Solid
Form
Powder
Color
Off-white
Odor
Odorless
Odor threshold
No data available
pH
No data available
Evaporation rate
No data available
Melting point
No data available
Freezing point
No data available
Initial boiling point (boiling range)
No data available
Flash point: No data available
Specific gravity: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Upper Flammability Limit: No data available
Lower Flammability Limit: No data available
Vapor pressure: No data available
Vapor density: No data available
Relative density: No data available
Solubility: No data available
Partition coefficient (n-octanol/water): No data available
Viscosity: No data available
EXPLOSIVE PROPERTIES: No data available
OXIDIZING PROPERTIES: No data available

SECTION 10: Stability and reactivity
Reactivity: Hazardous reactions will not occur under normal conditions.
Chemical stability: Stable under recommended handling and storage conditions (refer to section 7 of the SDS)
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use
Conditions to avoid: Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials: Bases, brass, copper, iron, iron salts, nickel, nitrates, oxidizing agents, powdered metals, reducing agents, strong acids, strong bases, strong oxidizing agents, strong reducing agents, zinc
Hazardous decomposition products: No hazardous decomposition products under normal conditions

SECTION 11: Toxicological information
Information on toxicological effects
Likely routes of exposure are skin/eye contact and ingestion.
Most important symptoms/effects, acute and delayed:
- **Dermal**
  - LD<sub>50</sub> Rat: No data available
- **Inhalation**
  - LC<sub>50</sub> Rat: No data available
- **Oral**
  - LD<sub>50</sub> Rat: >2000 mg/kg
Acute toxicity: This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

Product | Species | Acute Toxicity Estimate (ATE)
--- | --- | ---
DPD Powder (CAS Mixture) | | 
Acute | | 
**Dermal** | Rat | No data available
**Inhalation** | Rat | No data available
**Oral** | Rat | >2000 mg/kg
Components | | 
N,N-Diethyl-p-phenylenediamine sulfate salt (CAS 6065-27-6) | | 
Acute | | 
**Dermal** | Rat | No data available
SECTION 1: Identification

**Inhalation**
LC$_{50}$ Rat No data available

**Oral**
LD$_{50}$ Rat 500 mg/kg

Skin corrosion/irritation Causes skin irritation
Serious eye damage/eye irritation Causes serious eye irritation
Respiratory sensitization No data available
Skin sensitization No data available
Germ cell mutagenicity No data available

Carcinogenicity
IARC Monographs. Overall Evaluation of Carcinogenicity Not regulated
US National Toxicology Program (NTP) Report on Carcinogens Not regulated

Reproductive toxicity No data available
Specific target organ toxicity (single exposure) No data available
Specific target organ toxicity (repeated exposure) No data available
Aspiration hazard No data available

SECTION 12: Ecological information

Ecotoxicity This product is not classified as environmentally hazardous.
Persistence and degradability No data available
Bioaccumulative potential No data available
Mobility in soil No data available
Other adverse effects Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

DOT Not regulated as dangerous goods
IATA Not regulated as dangerous goods
IMDG Not regulated as dangerous goods

SECTION 15: Regulatory information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>Reportable Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium phosphate dibasic</td>
<td>7558-79-4</td>
<td>5000 lbs</td>
</tr>
</tbody>
</table>

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)
Not regulated

SARA 304 Emergency Release Notification
Not regulated

SARA 311/312 Hazardous Chemical
Chemical name CAS number
Sodium phosphate dibasic 7558-79-4
SARA 313 (TRI reporting)
Not regulated

TSCA Section 8(b) Chemical Inventory
All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)
Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated

Clean Water Act, Toxic and Priority Pollutants (40 CFR 401.15 and CFR 423, Appendix A)
Not regulated

Safe Drinking Water Act (SDWA)
Not regulated

US state regulations
California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)
Not regulated

Massachusetts Right-to-Know Act
Chemical name | CAS number
--- | ---
Sodium phosphate dibasic | 7558-79-4

New Jersey Worker and Community Right-to-Know Act
Chemical name | CAS number
--- | ---
Sodium phosphate dibasic | 7558-79-4

Pennsylvania Worker and Community Right-to-Know Act
Chemical name | CAS number
--- | ---
Sodium phosphate dibasic | 7558-79-4

Rhode Island Right-to-Know Act
Not regulated

**SECTION 16: Other information**

**NFPA Rating**
- Health hazard: 1
- Fire hazard: 0
- Reactivity: 0
- Specific: N/A

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**Issue date:**
May 2015

**Last revisions**
February 2018
SAFETY DATA SHEET

SECTION 1: Identification
Product identifier
   - FAS-DPD Titrating Reagent (Chlorine)
Product number
   - R-0871; R-0871-PL

Recommended use and restrictions
To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.

Manufacturer
Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification
Physical hazards
No data available

Health hazards
No data available

Environmental hazards
No data available

Label elements
Hazard pictograms
No data available

Signal word
No data available

Hazard statements
No data available

Precautionary statements
Prevention
No data available

Response
No data available

Storage
Keep tightly capped. Store out of direct sunlight between 36°F-85°F.

Disposal
No data available

Hazards not otherwise classified
Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.

SECTION 3: Composition/information on ingredients
Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Dihydrogen oxide</td>
<td>7732-18-5</td>
<td>&gt;99</td>
</tr>
</tbody>
</table>

Other components below reportable levels
<1

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical attention if irritation develops.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.

If swallowed
Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice.
Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
Fire hazard: Not flammable
Explosion hazard: Not explosive
Reactivity: Hazardous reactions will not occur under normal conditions.
Hazardous combustion products: Carbon oxides, iron oxides, nitrogen oxides, and sulfur oxides

Advice for firefighters
Precautionary measures: Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions: Use water spray or fog for cooling exposed containers.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information: Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recover, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits:
No occupational exposure limits noted for the ingredient(s)

Biological limit values:
No biological exposure limits noted for the ingredient(s)

Exposure controls:
Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.
Personal protective equipment
Eye/face protection  Wear appropriate chemical safety goggles if contact is likely to occur.
Skin protection  Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection  Wear appropriate protective clothing.
Respiratory protection  In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state  Liquid
Form  Liquid
Color  Clear, colorless or nearly colorless
Odor  Odorless
Odor threshold  No data available
pH  2.2
Evaporation rate  No data available
Melting point  No data available
Freezing point  No data available
Boiling point  212°F (100°C)
Flash point  No data available
Auto-ignition temperature  No data available
Decomposition temperature  No data available
Flammability (solid, gas)  No data available
Vapor pressure  17 mm Hg
Relative vapor density  0.6
Solubility  Soluble in all proportions
Partition coefficient (n-octanol/water)  No data available
Viscosity  No data available
Explosive properties  No data available
Oxidizing properties  No data available

SECTION 10: Stability and reactivity
Reactivity  Hazardous reactions will not occur under normal conditions.
Chemical stability  Stable under recommended handling and storage conditions (refer to section 7 of the SDS)
Possibility of hazardous reactions  No dangerous reaction known under conditions of normal use
Conditions to avoid  Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials  Metal compounds, nitromethane, oxidizing agents, sugars

SECTION 11: Toxicological information
Information on toxicological effects
Inhalation  May cause irritation to the respiratory system
Skin contact  May cause slight or mild transient irritation
Eye contact  May cause slight or mild transient irritation
Ingestion  May cause irritation, nausea, vomiting, and diarrhea

Most important symptoms/effects, acute and delayed
Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching.
Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.
Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

- **Acute toxicity**: No data available
- **Respiratory or skin sensitization**: No data available
- **Germ cell mutagenicity**: No data available
- **Carcinogenicity**: No data available
- **Reproductive toxicity**: No data available
- **Specific target organ toxicity** (single exposure): No data available
- **Specific target organ toxicity** (repeated exposure): No data available
- **Aspiration hazard**: No data available

### SECTION 12: Ecological information
This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### SECTION 13: Disposal considerations
Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

### SECTION 14: Transport information
No data available

### SECTION 15: Regulatory information
No data available

### SECTION 16: Other information
- **NFPA Rating**
  - Health hazard: 0
  - Fire hazard: 0
  - Reactivity: 0
  - Specific: N/A

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**Issue date:**
April 2015

**Last revision**
June 2016
SAFETY DATA SHEET

SECTION 1: Identification
Product identifier
Product name: FAS-DPD Titrating Reagent (Bromine)
Product number: R-0872
Recommended use and restrictions: To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer: Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification
Physical hazards: No data available
Health hazards: No data available
Environmental hazards: No data available
Label elements
Hazard pictograms: No data available
Signal word: No data available
Hazard statements: No data available
Precautionary statements
Prevention: No data available
Response: No data available
Storage: Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Disposal: No data available
Hazards not otherwise classified: Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.

SECTION 3: Composition/information on ingredients
Mixture
Chemical name: Water
Common name and synonyms: Dihydrogen oxide
CAS number: 7732-18-5
%: >99

Other components below reportable levels: <1

SECTION 4: First-aid measures
If inhaled: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.
In case of skin contact: Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical attention if irritation develops.
In case of eye contact: Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.
If swallowed: Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice.
Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
Fire hazard Not flammable
Explosion hazard Not explosive
Reactivity Hazardous reactions will not occur under normal conditions.
Hazardous combustion products Carbon oxides, iron oxides, nitrogen oxides, and sulfur oxides

Advice for firefighters
Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.
Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recover, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits No occupational exposure limits noted for the ingredient(s)
Biological limit values No biological exposure limits noted for the ingredient(s)
Exposure controls
Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.
Personal protective equipment
Eye/face protection
Wear appropriate chemical safety goggles if contact is likely to occur.
Skin protection
Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection
Wear appropriate protective clothing.
Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, colorless or nearly colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>2.2</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>212°F (100°C)</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>17 mm Hg</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>0.6</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in all proportions</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

Reactivity
Hazardous reactions will not occur under normal conditions.

Chemical stability
Stable under recommended handling and storage conditions (refer to section 7 of the SDS)

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use

Conditions to avoid
Contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials
Metal compounds, nitromethane, oxidizing agents, sugars

SECTION 11: Toxicological information

Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause irritation to the respiratory system</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause slight or mild transient irritation</td>
</tr>
<tr>
<td>Eye contact</td>
<td>May cause slight or mild transient irritation</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May cause irritation, nausea, vomiting, and diarrhea</td>
</tr>
<tr>
<td>Most important symptoms/effect, acute and delayed</td>
<td>Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching.</td>
</tr>
<tr>
<td></td>
<td>Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.</td>
</tr>
<tr>
<td></td>
<td>Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.</td>
</tr>
</tbody>
</table>
Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological information**

This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**SECTION 13: Disposal considerations**

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

**SECTION 14: Transport information**

No data available

**SECTION 15: Regulatory information**

No data available

**SECTION 16: Other information**

**NFPA Rating**

- Health hazard: 0
- Fire hazard: 0
- Reactivity: 0
- Specific: N/A

**Disclaimer**

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License granted to make unlimited paper copies for internal use only. This Safety Data Sheet may not be altered in any way without the expressed knowledge and permission of Taylor Technologies, Inc. The information contained in this sheet is based on lab experience and the most current data available.

**Issue date:**

April 2015

**Last revision**

June 2016
SAFETY DATA SHEET

SECTION 1: Identification

Product identifier
Product name
DPD Reagent #3
Product number
R-0003; R-0003-PL

Recommended use and restrictions
To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.

Manufacturer
Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification

Physical hazards
Not applicable

Health hazards
Specific target organ toxicity, repeated exposure, oral Category 1

Environmental hazards
Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements
Hazard pictograms

Signal word
Danger

Hazard statements
Causes damage to thyroid through prolonged or repeated exposure, oral route

Precautionary statements
Prevention
Do not breathe dust/fumes/gas/mists/vapors/spray. Wash skin thoroughly after handling. Do not eat, drink, or smoke when using this product.

Response
IF EXPOSED OR CONCERNED: Get medical advice/attention if you feel unwell.

Storage
Keep tightly capped. Store out of direct sunlight between 36°F–85°F.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard not otherwise classified
Not applicable

SECTION 3: Composition/information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>% w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Dihydrogen oxide</td>
<td>7732-18-5</td>
<td>60–80</td>
</tr>
<tr>
<td>Potassium iodide</td>
<td>Hydriodic acid, potassium salt</td>
<td>7681-11-0</td>
<td>15–40</td>
</tr>
</tbody>
</table>

Nonhazardous and other components below reportable levels
Not applicable

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.
If swallowed
Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
Fire hazard Not flammable
Explosion hazard Not explosive
Reactivity Hazardous reactions will not occur under normal conditions.
Hazardous combustion products Carbon oxides, hydrogen iodide, iodide fumes, iodine oxides, potassium oxide. Other irritating fumes and smoke.

Advice for firefighters
Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.
Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse.
Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe dust or mists. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits
US ACGIH Threshold Limit Values
Not regulated
US NIOSH: Pocket Guide to Chemical Hazards
Not regulated

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Not regulated

Biological limit values
No biological exposure limits noted for the ingredient(s)

Exposure controls
- Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

- Personal protective equipment
  - Eye/face protection: Wear appropriate chemical safety goggles if contact is likely to occur.
  - Skin protection: Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
  - Body protection: Wear appropriate protective clothing if contact is likely to occur.
  - Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties
- Physical state: Liquid
- Form: Liquid
- Color: Clear, colorless or nearly colorless
- Odor: Odorless
- Odor threshold: No data available
- pH: 7.6
- Evaporation rate: No data available
- Melting point: No data available
- Freezing point: No data available
- Initial boiling point (boiling range): No data available
- Flash point: No data available
- Specific gravity: No data available
- Auto-ignition temperature: No data available
- Decomposition temperature: No data available
- Flammability (solid, gas): No data available
- Upper Flammability Limit: No data available
- Lower Flammability Limit: No data available
- Vapor pressure: No data available
- Vapor density: No data available
- Solubility: No data available
- Partition coefficient (n-octanol/water): No data available
- Viscosity: No data available
- Explosive properties: No data available
- Oxidizing properties: No data available

SECTION 10: Stability and reactivity

- Reactivity: Hazardous reactions will not occur under normal conditions.
- Chemical stability: Stable under recommended handling and storage conditions (refer to section 7 of the SDS)
Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use

Conditions to avoid
Contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials
Fluorine perchlorate, mercurous chloride, metals, oxidizing agents, strong acids

Hazardous decomposition products
No hazardous decomposition products under normal conditions

SECTION 11: Toxicological information

Likely routes of exposure are skin/eye contact and ingestion.

Most important symptoms/effects, acute and delayed
Direct skin contact may cause irritation. Symptoms may include redness and itching.

Direct eye contact may cause serious irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of dust can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms of exposure include: skin rash, running nose, headache, and irritation of the mucous membrane. For severe cases the skin may show pimples, boils, hives, blisters, and black and blue spots.

Acute toxicity
This product is not classified as an acute toxicity hazard.

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory sensitization
No data available

Skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
IARC Monographs. Overall Evaluation of Carcinogenicity
Not regulated

Not regulated

US National Toxicology Program (NTP) Report on Carcinogens
Not regulated

Reproductive toxicity
No data available

Specific target organ toxicity (single exposure)
No data available

Specific target organ toxicity (repeated exposure)
Causes damage to thyroid through prolonged or repeated exposure, oral route

Aspiration hazard
No data available

SECTION 12: Ecological information

Ecotoxicity
This product is not classified as environmentally hazardous.

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations
Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.
SECTION 14: Transport information

DOT: Not regulated as dangerous goods
IATA: Not regulated as dangerous goods
IMDG: Not regulated as dangerous goods

SECTION 15: Regulatory information

US federal regulations
- CERCLA Hazardous Substance (40 CFR 302.4)
  Not regulated
- SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)
  Not regulated
- SARA 304 Emergency Release Notification
  Not regulated
- SARA 311/312 Hazardous Chemical
  Chemical name       | CAS number
  -------------------|-------------
  Potassium iodide   | 7681-11-0
- SARA 313 (TRI reporting)
  Not regulated
- TSCA Section 8(b) Chemical Inventory
  All components are on the U.S. EPA TSCA Inventory list.
- TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
  Not regulated

Other federal regulations
- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)
  Not regulated
- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
  Not regulated
- Clean Water Act, Toxic and Priority Pollutants (40 CFR 401.15 and CFR 423, Appendix A)
  Not regulated
- Safe Drinking Water Act (SDWA)
  Not regulated

US state regulations
- California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)
  Not regulated
- Massachusetts Right-to-Know Act
  Not regulated
- New Jersey Worker and Community Right-to-Know Act
  Not regulated
- Pennsylvania Worker and Community Right-to-Know Act
  Not regulated
- Rhode Island Right-to-Know Act
  Not regulated
SECTION 16: Other information

NFPA Rating
- Health hazard: 1
- Fire hazard: 0
- Reactivity: 0
- Specific: N/A

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Issue date:
May 2015

Last revisions
March 2018
SAFETY DATA SHEET

SECTION 1: Identification
Product identifier
Product name pH Indicator Solution (Phenol Red)
Product number R-0004
Recommended use and restrictions
To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification
Physical hazards Not applicable
Health hazards Not applicable
Environmental hazards Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
Precautionary statements
Prevention Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.
Response This reagent is not defined as a hazardous chemical per OSHA’s Hazard Communication Standard 2012; however, use care when handling.
Storage Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Disposal Not applicable
Hazard not otherwise classified Not applicable

SECTION 3: Composition/information on ingredients
Mixture
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>% w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Dihydrogen oxide</td>
<td>7732-18-5</td>
<td>95–98</td>
</tr>
<tr>
<td>m-Cresol</td>
<td>3-Methylphenol</td>
<td>108-39-4</td>
<td>0.1–0.5</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>0.1–1</td>
</tr>
</tbody>
</table>

SECTION 4: First-aid measures
If inhaled
Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

If swallowed
Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.
Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
Suitable extinguishing media   Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media  Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
Fire hazard   Not flammable
Explosion hazard   Not explosive
Reactivity   Hazardous reactions will not occur under normal conditions.
Hazardous combustion products   Carbon oxides, nitrogen oxides. Other irritating fumes and smoke.

Advice for firefighters
Precautionary measures   Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions   Use water spray or fog for cooling exposed containers.
Protection during firefighting   Do not enter fire area without proper protective equipment, including respiratory protection.
Other information   Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse.
Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F-85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

US ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol (CAS 108-39-4)</td>
<td>TWA</td>
<td>20 mg/m³ (skin)</td>
</tr>
</tbody>
</table>

US NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol (CAS 108-39-4)</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>
US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol (CAS 108-39-4)</td>
<td>TWA</td>
<td>22 mg/m³ (skin)</td>
</tr>
</tbody>
</table>

**Biological limit values**
No biological exposure limits noted for the ingredient(s)

**Exposure controls**
Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment
- **Eye/face protection**: Wear appropriate chemical safety goggles if contact is likely to occur.
- **Skin protection**: Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
- **Body protection**: Wear appropriate protective clothing.
- **Respiratory protection**: In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

**SECTION 9: Physical and chemical properties**

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, red</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight phenolic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>7.6</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>212°F (100°C)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.00</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>17 mm Hg</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>0.6</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in all proportions</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>98</td>
</tr>
</tbody>
</table>

**SECTION 10: Stability and reactivity**

**Reactivity**
This product is stable and nonreactive under normal conditions of use, storage, and transport.

**Chemical stability**
Stable under recommended handling and storage conditions (refer to section 7 of the SDS)

**Possibility of hazardous reactions**
No dangerous reaction known under conditions of normal use
Conditions to avoid: Contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials: Oxidizing agents

Hazardous decomposition products: No hazardous decomposition products under conditions of normal use. In the event of fire, see section 5 of the SDS.

SECTION 11: Toxicological information

Information on toxicological effects:
- **Inhalation**: May cause irritation to the respiratory system
- **Skin contact**: May cause slight or mild transient irritation. May cause staining.
- **Eye contact**: May cause slight or mild transient irritation
- **Ingestion**: May cause irritation, nausea, vomiting, and diarrhea

Most important symptoms/effects, acute and delayed:
- Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, cracking, and staining of the skin.
- Direct contact with eyes may cause temporary irritation. Symptoms may include stinging and tearing.
- Inhalation of mists can cause respiratory irritation. Symptoms may include coughing, and breathing difficulties.
- Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea

Acute toxicity:
This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Acute Toxicity Estimate (ATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dermal</strong></td>
<td>Rabbit</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td><strong>LD₅₀</strong></td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Rat</td>
<td>&gt;20 mg/L</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
</tbody>
</table>

Components:

<table>
<thead>
<tr>
<th>m-Cresol (CAS 108-39-4)</th>
<th>Species</th>
<th>Acute Toxicity Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute</strong></td>
<td>Rabbit</td>
<td>2050 mg/kg</td>
</tr>
<tr>
<td><strong>LD₅₀</strong></td>
<td>Rat</td>
<td>1100 mg/kg</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Rat</td>
<td>0.116 mg/L</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td>Rat</td>
<td>242 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: May cause slight or mild transient irritation

Serious eye damage/eye irritation: May cause temporary irritation

Respiratory sensitization: Not expected to be a respiratory sensitizer

Skin sensitization: Not expected to be a skin sensitizer

Germ cell mutagenicity: Not expected to be a mutagenic

Carcinogenicity:
- **IARC Monographs. Overall Evaluation of Carcinogenicity**: Not classifiable
- **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)**: Not regulated
- **US National Toxicology Program (NTP) Report on Carcinogens**: Not regulated
Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity (single exposure): No data available

Specific target organ toxicity (repeated exposure): No data available

Aspiration hazard: No data available

SECTION 12: Ecological information

Ecotoxicity: This product is not classified as environmentally hazardous.

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

Other adverse effects: Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

DOT: Not regulated as dangerous goods

IATA: Not regulated as dangerous goods

IMDG: Not regulated as dangerous goods

SECTION 15: Regulatory information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>Reportable Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>108-39-4</td>
<td>100 lbs</td>
</tr>
</tbody>
</table>


Not regulated


Not regulated

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>108-39-4</td>
</tr>
</tbody>
</table>

TSCA Section 8(b) Chemical Inventory

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>108-39-4</td>
</tr>
</tbody>
</table>

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated
Safe Drinking Water Act (SDWA)
Not regulated

US state regulations
California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)
Not regulated

Massachusetts Right-to-Know Act

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
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</tr>
</tbody>
</table>

New Jersey Worker and Community Right-to-Know Act

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
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<td>108-39-4</td>
</tr>
</tbody>
</table>

Pennsylvania Worker and Community Right-to-Know Act

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>108-39-4</td>
</tr>
</tbody>
</table>

Rhode Island Right-to-Know Act

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-Cresol</td>
<td>108-39-4</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

NFPA Rating

| Health hazard | 0 |
| Fire hazard  | 0 |
| Reactivity   | 0 |
| Specific     | N/A |

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

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Issue date:
May 2015

Last revisions
January 2018
SAFETY DATA SHEET

SECTION 1: Identification

Product identifier
Product name
Acid Demand Reagent
Product number
R-0005; R-0005-PL
Recommended use and restrictions
To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer
Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification

Physical hazards
Corrosive to metals
Category 1
Health hazards
Eye damage/irritation
Category 1
Skin corrosion/irritation
Category 1C
Environmental hazards
Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements
Hazard pictograms
Signal word
Danger
Hazard statements
May be corrosive to metals. Causes severe skin burns and serious eye damage.
Precautionary statements
Prevention
Do not breathe dust or mists. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur. Keep only in original container.
Response
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (OR HAIR): Immediately take off all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a physician or poison control center. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a physician or poison control center. Absorb spillage to prevent material damage.
Storage
Store in corrosive-resistant container with corrosive-resistant inner liner. Keep tightly capped. Store locked up. Store out of direct sunlight between 36°F–85°F.
Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard not otherwise classified
Not applicable

SECTION 3: Composition/information on ingredients

Mixture
Chemical name
Common name and synonyms
CAS number
% w/w
Water
Dihydrogen oxide
7732-18-5
80–100
Sulfuric acid
Sulphuric acid; Dihydrogen sulfate
7664-93-9
0.1–1

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.
In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops. Chemical burns must be treated by a physician.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

If swallowed
Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture

Fire hazard Not flammable
Explosion hazard Not explosive
Reactivity May be corrosive to metals
Hazardous combustion products Sulfur oxides. Other irritating fumes and smoke.

Advice for firefighters
Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.
Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mists or vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Dilute acid with water and neutralize with dilute base. If not recoverable, dilute with water or flush to holding area and neutralize. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe dust or mists. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.
Conditions for safe storage, including any incompatibilities
Store in corrosive-resistant container with corrosive-resistant inner liner. Keep tightly capped. Store locked up. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

US ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td>TWA</td>
<td>0.2 mg/m³ (thoracic particulate)</td>
</tr>
</tbody>
</table>

US NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s)

Exposure controls

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment

Eye/face protection

Wear appropriate chemical safety goggles if contact is likely to occur.

Skin protection

Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.

Body protection

Wear appropriate protective clothing if contact is likely to occur.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>1.3</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point (boiling range)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Vapor density: No data available
Solubility: No data available
Partition coefficient (n-octanol/water): No data available
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available

**SECTION 10: Stability and reactivity**

**Reactivity**
May be corrosive to metals

**Chemical stability**
Stable under recommended handling and storage conditions (refer to section 7 of the SDS)

**Possibility of hazardous reactions**
No dangerous reaction known under conditions of normal use

**Conditions to avoid**
Contact with incompatible materials. Do not use in areas without adequate ventilation.

**Incompatible materials**
Bases, chlorates, halides, hydrogen peroxide, metal compounds, nitrates, nitromethane, organic materials, oxidizing agents, perchlorates, phosphorous

**Hazardous decomposition products**
No hazardous decomposition products under normal conditions

**SECTION 11: Toxicological information**

**Information on toxicological effects**

**Likely routes of exposure are skin/eye contact and ingestion.**

- **Most important symptoms/effects, acute and delayed**
  - Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring.
  - Direct contact with concentrated solutions may be corrosive and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
  - Inhalation of mists can cause respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.
  - May produce burns to lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, and bleeding.

**Acute toxicity**
This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

**Product**
Acid Demand Reagent (CAS Mixture)

**Acute**

- **Dermal**
  - LD$_{50}$: Rat (No data available)
- **Inhalation**
  - LC$_{50}$: Rat (>5 mg/L)
- **Oral**
  - LD$_{50}$: Rat (>2000 mg/kg)

**Components**
Sulfuric acid (CAS 7664-93-9)

**Acute**

- **Dermal**
  - LD$_{50}$: Rat (No data available)
- **Inhalation**
  - LC$_{50}$: Rat (0.375 mg/L (for aerosol mists))
- **Oral**
  - LD$_{50}$: Rat (2140 mg/kg)

**Skin corrosion/irritation**
Causes severe skin burns

**Serious eye damage/eye irritation**
Causes serious eye damage

**Respiratory sensitization**
No data available
Skin sensitization: No data available
Germ cell mutagenicity: No data available

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity
Not regulated

Not regulated

US National Toxicology Program (NTP) Report on Carcinogens
Not regulated

Reproductive toxicity: No data available
Specific target organ toxicity (single exposure): No data available
Specific target organ toxicity (repeated exposure): No data available
Aspiration hazard: No data available

SECTION 12: Ecological information

Ecotoxicity: This product is not classified as environmentally hazardous.
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
Other adverse effects: Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

DOT
- UN number: 2796
- UN Proper shipping name: Sulfuric acid solution
- Reportable Quantity: 1000 lbs
- Class (Subsidiary risk): 8
- Label(s): 8
- Packing group: II
- Special provisions: 386, A3, A7, B2, B15, IB2, N6, N34, T8, TP2
- Packaging exceptions: 154
- Packaging, non-bulk: 202

IATA
- UN number: 2796
- UN Proper shipping name: Sulphuric acid solution
- Class (Subsidiary risk): 8
- Packing group: II
- Special provisions: None

IMDG
- UN number: 2796
- UN Proper shipping name: Sulphuric acid solution
- Class (Subsidiary risk): 8
- Packing group: II
Environmental hazards
Marine pollutant No
Special provisions None
EmS F-A, S-B
Special precautions for user Read safety instructions, SDS, and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
This substance/mixture is not intended to be transported in bulk.
DOT hazard pictograms

IATA; IMDG hazard pictograms

SECTION 15: Regulatory information

US federal regulations
CERCLA Hazardous Substance (40 CFR 302.4)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>Reportable Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>1000 lbs</td>
</tr>
</tbody>
</table>

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)

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<tr>
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</table>

SARA 304 Emergency Release Notification

<table>
<thead>
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<th>CAS number</th>
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</thead>
<tbody>
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</table>

SARA 311/312 Hazardous Chemical

<table>
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</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
</tr>
</tbody>
</table>

SARA 313 (TRI reporting)
Not regulated

TSCA Section 8(b) Chemical Inventory
All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)
Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated

Clean Water Act, Toxic and Priority Pollutants (40 CFR 401.15 and CFR 423, Appendix A)
Not regulated

Safe Drinking Water Act (SDWA)
Not regulated

US state regulations
California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)
Not regulated
Massachusetts Right-to-Know Act

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
</tr>
</tbody>
</table>

New Jersey Worker and Community Right-to-Know Act

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
</tr>
</tbody>
</table>

Pennsylvania Worker and Community Right-to-Know Act

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
</tr>
</tbody>
</table>

Rhode Island Right-to-Know Act

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

**NFPA Rating**

- Health hazard: 2
- Fire hazard: 0
- Reactivity: 0
- Specific: N/A

**Disclaimer**

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**Issue date:**

May 2015

**Last revisions**

March 2018
SAFETY DATA SHEET

SECTION 1: Identification

Product identifier

Product name: Base Demand Reagent

Product number: R-0006

Recommended use and restrictions: To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.

Manufacturer: Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification

Physical hazards: No data available

Health hazards: Eye damage/irritation Category 2A

Environmental hazards: No data available

Label elements

Hazard pictograms

Signal word: Warning

Hazard statements: Causes serious eye irritation

Precautionary statements

Prevention: Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. IF EYE IRRITATION PERSISTS: Get medical advice/attention.

Storage: Keep tightly capped. Store out of direct sunlight between 36°F–85°F.

Disposal: No data available

Hazard(s) not otherwise classified: No data available

SECTION 3: Composition/information on ingredients

Mixture

Chemical name: Water
Common name and synonyms: Dihydrogen oxide
CAS number: 7732-18-5
%: >99

Chemical name: Sodium carbonate
Common name and synonyms: Soda ash
CAS number: 497-19-8
%: <1

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical attention if irritation develops.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.
If swallowed
Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice.

**Most important symptoms and effects, both acute and delayed**
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

**Indication of any immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically.

**General information**
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

### SECTION 5: Firefighting measures

**Extinguishing media**
- Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**Specific hazards arising from the substance or mixture**
- **Fire hazard**: Not flammable
- **Explosion hazard**: Not explosive
- **Reactivity**: Hazardous reactions will not occur under normal conditions.
- **Hazardous combustion products**: Carbon oxides and sodium oxides

**Advice for firefighters**
- **Precautionary measures**: Exercise caution when fighting any chemical fire; hazardous fumes will be present.
- **Firefighting equipment/instructions**: Use water spray or fog for cooling exposed containers.
- **Protection during firefighting**: Do not enter fire area without proper protective equipment, including respiratory protection.
- **Other information**: Refer to section 9 of the SDS for flammability properties.

### SECTION 6: Accidental release measures

**Personal precautions, protective equipment, and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

**Environmental precautions**
Avoid discharge into drains, watercourses, or onto the ground.

**Methods and material for containment and cleaning up**
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water to remove residual contamination. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**Reference to other sections**
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

### SECTION 7: Handling and storage

**Precautions for safe handling**
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

**Conditions for safe storage, including any incompatibilities**
Keep tightly capped. Store out of direct sunlight between 36°F – 85°F. Store away from incompatible materials (refer to section 10 of the SDS).

### SECTION 8: Exposure controls/personal protection

**Occupational exposure limits**
No occupational exposure limits noted for the ingredient(s)

**Biological limit values**
No biological exposure limits noted for the ingredient(s)
Exposure controls

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment

Eye/face protection: Wear appropriate chemical safety goggles if contact is likely to occur.

Skin protection: Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.

Body protection: Wear appropriate protective clothing.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, colorless or nearly colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>11.2</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>212°F (100°C)</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>17 mm Hg</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>0.6</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in all proportions</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical stability: Stable under recommended handling and storage conditions (refer to section 7 of the SDS)

Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use

Conditions to avoid: Contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials: Strong acids

SECTION 11: Toxicological information

Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause irritation to the respiratory system</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause slight or mild transient irritation</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May cause irritation, nausea, vomiting, and diarrhea</td>
</tr>
</tbody>
</table>
Most important symptoms/effects, acute and delayed

Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching.

Direct eye contact may cause serious irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Acute toxicity

This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components

<table>
<thead>
<tr>
<th>Sodium carbonate (CAS 497-19-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Species</strong></td>
</tr>
<tr>
<td>Acute</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
</tr>
<tr>
<td>LC_{50}</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
</tr>
<tr>
<td>LD_{50}</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
</tr>
<tr>
<td>Carcinogenicity</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
</tr>
<tr>
<td>Aspiration hazard</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

- DOT: Not regulated as a dangerous good
- IATA: Not regulated as a dangerous good
- IMDG: Not regulated as a dangerous good

SECTION 15: Regulatory information

No data available

SECTION 16: Other information

NFPA Rating

| Health hazard | 1 |
| Fire hazard | 0 |
| Reactivity | 0 |
| Specific | N/A |

Disclaimer

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SAFETY DATA SHEET

SECTION 1: Identification

Product identifier

Product name: Thiosulfate N/10

Product number: R-0007; R-0007-PL

Recommended use and restrictions

To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.

Manufacturer

Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification

Physical hazards

Not applicable

Health hazards

Not applicable

Environmental hazards

Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements

Hazard pictograms

Not applicable

Signal word

Not applicable

Hazard statements

Not applicable

Precautionary statements

Prevention

Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.

Response

This reagent is not defined as a hazardous chemical per OSHA’s Hazard Communication Standard 2012; however, use care when handling.

Storage

Keep tightly capped. Store out of direct sunlight between 36°F–85°F.

Disposal

Not applicable

Hazard not otherwise classified

Not applicable

SECTION 3: Composition/information on ingredients

Mixture

Chemical name: Water
Common name and synonyms: Dihydrogen oxide
CAS number: 7732-18-5
% w/w: 95–10

Chemical name: Sodium thiosulfate pentahydrate
Common name and synonyms: Not applicable
CAS number: 10102-17-7
% w/w: 1–5

Other components below reportable levels

Chemical name: Not applicable
Common name and synonyms: Not applicable
CAS number: Not applicable
% w/w: 0.1–1

SECTION 4: First-aid measures

If inhaled

Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

If swallowed

Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.

Thiosulfate N/10; R-0007; R-0007-PL

SDS US
Page 1 of 6
Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
- Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
- Fire hazard: Not flammable
- Explosion hazard: Not explosive
- Reactivity: Hazardous reactions will not occur under normal conditions.
- Hazardous combustion products: Carbon oxides, sodium oxides, sulfur oxides. Other irritating fumes and smoke.

Advice for firefighters
- Precautionary measures: Exercise caution when fighting any chemical fire; hazardous fumes will be present.
- Firefighting equipment/instructions: Use water spray or fog for cooling exposed containers.
- Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information: Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spills cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F−85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits
- US ACGIH Threshold Limit Values: Not regulated
- US NIOSH: Pocket Guide to Chemical Hazards: Not regulated
- US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000): Not regulated

Biological limit values
No biological exposure limits noted for the ingredient(s)
Exposure controls
Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment
Eye/face protection: Wear appropriate chemical safety goggles if contact is likely to occur.
Skin protection: Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection: Wear appropriate protective clothing.
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties
Information on basic physical and chemical properties
- Physical state: Liquid
- Form: Liquid
- Color: Clear, colorless or nearly colorless
- Odor: Odorless
- Odor threshold: Not applicable
- pH: 9.6
- Evaporation rate: No data available
- Melting point: Not applicable
- Freezing point: No data available
- Boiling point: 212°F (100°C)
- Flash point: Not applicable
- Specific gravity: No data available
- Auto-ignition temperature: Not applicable
- Decomposition temperature: No data available
- Flammability (solid, gas): Not applicable
- Upper Flammability Limit: Not applicable
- Lower Flammability Limit: Not applicable
- Vapor pressure: 17 mm Hg
- Relative vapor density: 0.6
- Solubility: Soluble in all proportions
- Partition coefficient (n-octanol/water): No data available
- Viscosity: No data available
- Explosive properties: Not applicable
- Oxidizing properties: No data available
- Percent volatile: 97.5%

SECTION 10: Stability and reactivity
Reactivity: Hazardous reactions will not occur under normal conditions.
Chemical stability: Stable under recommended handling and storage conditions (refer to section 7 of the SDS)
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use
Conditions to avoid: Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials: Oxidizing agents and strong acids
Hazardous decomposition products: No hazardous decomposition products under normal conditions
SECTION 11: Toxicological information

Information on toxicological effects

Inhalation
May cause irritation to the respiratory system

Skin contact
May cause slight or mild transient irritation

Eye contact
May cause slight or mild transient irritation

Ingestion
May cause irritation, nausea, vomiting, and diarrhea

Most important symptoms/effects, acute and delayed

Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.

Eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching.

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Acute toxicity

This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Acute Toxicity Estimate (ATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiosulfate N/10 (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD$_{50}$</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC$_{50}$</td>
<td>Rat</td>
<td>Not available</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD$_{50}$</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Acute Toxicity Data</td>
</tr>
<tr>
<td>Sodium thiosulfate pentahydrate (CAS 10102-17-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
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<td></td>
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<tr>
<td>LD$_{50}$</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC$_{50}$</td>
<td>Rat</td>
<td>Not available</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD$_{50}$</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
May cause slight or mild transient irritation

Serious eye damage/eye irritation
May cause slight or mild transient irritation

Respiratory sensitization
No data available

Skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity
Not classifiable

Not regulated

US National Toxicology Program (NTP) Report on Carcinogens
Not regulated

Reproductive toxicity
No data available

Specific target organ toxicity (single exposure)
No data available

Specific target organ toxicity (repeated exposure)
No data available

Aspiration hazard
No data available
SECTION 12: Ecological information

Ecotoxicity
This product is not classified as environmentally hazardous.

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

DOT
Not regulated as dangerous goods

IATA
Not regulated as dangerous goods

IMDG
Not regulated as dangerous goods

SECTION 15: Regulatory information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)
Not regulated

Not regulated

Not regulated

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)
Not regulated

SARA 304 Emergency Release Notification
Not regulated

SARA 311/312 Hazardous Chemical
Not regulated

SARA 313 (TRI reporting)
Not regulated

TSCA Section 8(b) Chemical Inventory
All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)
Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated

Safe Drinking Water Act (SDWA)
Not regulated

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)
Not regulated

Massachusetts Right-to-Know Act
Not regulated
New Jersey Worker and Community Right-to-Know Act
   Not regulated

Pennsylvania Worker and Community Right-to-Know Act
   Not regulated

Rhode Island Right-to-Know Act
   Not regulated

SECTION 16: Other information

NFPA Rating
- Health hazard 0
- Fire hazard 0
- Reactivity 0
- Specific N/A

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Issue date:
   May 2015

Last revisions
   September 2017
SAFETY DATA SHEET


SECTION 1: Identification

Product identifier
Product name: Total Alkalinity Indicator
Product number: R-0008
Recommended use and restrictions:
To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer:
Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification

Physical hazards: Not applicable
Health hazards: Not applicable
Environmental hazards: Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements
Hazard pictograms: Not applicable
Signal word: Not applicable
Hazard statements: Not applicable
Precautionary statements
Prevention: Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.
Response: This reagent is not defined as a hazardous chemical per OSHA’s Hazard Communication Standard 2012; however, use care when handling.
Storage: Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Disposal: Not applicable
Hazard(s) not otherwise classified: Not applicable

SECTION 3: Composition/information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>% w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Dihydrogen oxide</td>
<td>7732-18-5</td>
<td>99–100</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>0.1–1</td>
</tr>
</tbody>
</table>

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

If swallowed
Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.
Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
- Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
- Fire hazard Not flammable
- Explosion hazard Not explosive
- Reactivity Hazardous reactions will not occur under normal conditions.
- Hazardous combustion products Bromine fumes, bromine oxides, carbon oxides, hydrogen bromide, nitrogen oxides, sodium oxides, sulfur oxides. Other irritating fumes and smoke.

Advice for firefighters
- Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.
- Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.
- Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits
- US ACGIH Threshold Limit Values Not regulated
- US NIOSH: Pocket Guide to Chemical Hazards Not regulated
- US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Not regulated

Biological limit values
No biological exposure limits noted for the ingredient(s)
Exposure controls
Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment
Eye/face protection
Wear appropriate chemical safety goggles if contact is likely to occur.
Skin protection
Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection
Wear appropriate protective clothing.
Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| Physical state | Liquid |
| Form | Liquid |
| Color | Dark green |
| Odor | Odorless |
| Odor threshold | Not applicable |
| pH | 8.5 |
| Evaporation rate | No data available |
| Melting point | Not applicable |
| Freezing point | No data available |
| Boiling point | 212°F (100°C) |
| Flash point | Not applicable |
| Specific gravity | No data available |
| Auto-ignition temperature | Not applicable |
| Decomposition temperature | No data available |
| Flammability (solid, gas) | Not applicable |
| Upper Flammability Limit | Not applicable |
| Lower Flammability Limit | Not applicable |
| Vapor pressure | 17 mm Hg |
| Relative vapor density | 0.6 |
| Solubility | Soluble in all proportions |
| Partition coefficient (n-octanol/water) | No data available |
| Viscosity | No data available |
| Explosive properties | Not applicable |
| Oxidizing properties | Not applicable |
| Percent volatile | 99% |

SECTION 10: Stability and reactivity

Reactivity
Hazardous reactions will not occur under normal conditions.

Chemical stability
Stable under recommended handling and storage conditions (refer to section 7 of the SDS)

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use

Conditions to avoid
Contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials
Oxidizing agents, strong acids

Hazardous decomposition products
No hazardous decomposition products under normal conditions
SECTION 11: Toxicological information

Information on toxicological effects

Inhalation
May cause irritation to the respiratory system

Skin contact
May cause slight or mild transient irritation

Eye contact
May cause slight or mild transient irritation

Ingestion
May cause irritation, nausea, vomiting, and diarrhea

Most important symptoms/effects, acute and delayed
Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching.

Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Acute toxicity
This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Acute Toxicity Estimate (ATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Alkalinity Indicator (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD₅₀</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC₅₀</td>
<td>Rat</td>
<td>&gt;20 mg/L</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD₅₀</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td></td>
<td>No data available</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td></td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td></td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IARC Monographs. Overall Evaluation of Carcinogenicity</td>
<td>Not classifiable</td>
<td></td>
</tr>
<tr>
<td>US National Toxicology Program (NTP) Report on Carcinogens</td>
<td>Not regulated</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td></td>
<td>No data available</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td></td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

Ecotoxicity
This product is not classified as environmentally hazardous.

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
Large or frequent spills can have a harmful or damaging effect on the environment.
SECTION 13: Disposal considerations
Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information
- DOT: Not regulated as dangerous goods
- IATA: Not regulated as dangerous goods
- IMDG: Not regulated as dangerous goods

SECTION 15: Regulatory information
US federal regulations
- CERCLA Hazardous Substance (40 CFR 302.4)
  Not regulated
  Not regulated
  Not regulated
- SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)
  Not regulated
- SARA 304 Emergency Release Notification
  Not regulated
- SARA 311/312 Hazardous Chemical
  Not regulated
- SARA 313 (TRI reporting)
  Not regulated
- TSCA Section 8(b) Chemical Inventory
  All components are on the U.S. EPA TSCA Inventory list.
- TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
  Not regulated

Other federal regulations
- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)
  Not regulated
- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
  Not regulated
- Safe Drinking Water Act (SDWA)
  Not regulated

US state regulations
- California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)
  Not regulated
- Massachusetts Right-to-Know Act
  Not regulated
- New Jersey Worker and Community Right-to-Know Act
  Not regulated
- Pennsylvania Worker and Community Right-to-Know Act
  Not regulated
- Rhode Island Right-to-Know Act
  Not regulated
SECTION 16: Other information

NFPA Rating

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard</td>
<td>0</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
<tr>
<td>Specific</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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Issue date:
May 2015

Last revisions
September 2017
SAFETY DATA SHEET

SECTION 1: Identification

Product identifier
Product name: Sulfuric Acid .12N
Product number: R-0009; R-0009-PL

Recommended use and restrictions
To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.

Manufacturer
Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification

Physical hazards
Corrosive to metals Category 1

Health hazards
Eye damage/irritation Category 1
Skin corrosion/irritation Category 1C

Environmental hazards
Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements
Hazard pictograms

Signal word
Danger

Hazard statements
May be corrosive to metals. Causes severe skin burns and eye damage.

Precautionary statements
Prevention
Keep only in original container. Do not breathe mists or vapors. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur.

Response
Absorb spillage to prevent material damage. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a physician or poison control center. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a physician or poison control center.

Storage
Store in a corrosive-resistant container with a corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store locked up.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified
Not applicable

SECTION 3: Composition/information on ingredients

Mixture
Chemical name
Common name and synonyms
CAS number
% w/w

Water
Dihydrogen oxide
7732-18-5
99–100

Sulfuric acid
Oil of vitriol
7664-93-9
0.1–1

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.
In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops. Chemical burns must be treated by a physician.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

If swallowed
Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
Fire hazard Not flammable
Explosion hazard Not explosive
Reactivity May be corrosive to metals
Hazardous combustion products Sulfur oxides. Other irritating fumes and smoke.

Advice for firefighters
Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.
Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Dilute acid with water and neutralize with dilute base. If not recoverable, dilute with water or flush to holding area and neutralize. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.
Conditions for safe storage, including any incompatibilities
Store in corrosive-resistant container with a corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F-85°F. Store locked up. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US ACGIH Threshold Limit Values</th>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td>TWA</td>
<td></td>
<td>0.2 mg/m³ (thoracic particulate)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US NIOSH: Pocket Guide to Chemical Hazards</th>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td>TWA</td>
<td></td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td>TWA</td>
<td></td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s)

Exposure controls
Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment
Eye/face protection
Wear appropriate chemical safety goggles if contact is likely to occur.

Skin protection
Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.

Body protection
Wear appropriate protective clothing.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>1.3</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>212°F (100°C)</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.00</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>17 mm Hg</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>0.6</td>
</tr>
</tbody>
</table>
Solubility: Soluble in all proportions
Partition coefficient (n-octanol/water): No data available
Viscosity: No data available
Explosive properties: Not applicable
Oxidizing properties: Not applicable
Percent volatile: 99.6%

SECTION 10: Stability and reactivity

Reactivity: May be corrosive to metals
Chemical stability: Stable under recommended handling and storage conditions (refer to section 7 of the SDS)
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use
Conditions to avoid: Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials: Metal compounds, nitromethane, oxidizing agents, strong bases, sugars
Hazardous decomposition products: No hazardous decomposition products under conditions of normal use

SECTION 11: Toxicological information

Information on toxicological effects

Inhalation: May cause irritation to the respiratory system
Skin contact: Causes severe skin burns
Eye contact: Causes serious eye damage
Ingestion: Causes digestive tract burns

Most important symptoms/effects, acute and delayed

Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring.
Direct contact with concentrated solutions may be corrosive and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Inhalation of mists can cause respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.
May produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.

Acute toxicity

This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Acute Toxicity Estimate (ATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.12N Sulfuric acid (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD$_{50}$</td>
<td>Rat</td>
<td>No data available</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC$_{50}$</td>
<td>Rat</td>
<td>&gt;20 mg/L</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD$_{50}$</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
</tbody>
</table>

Components

Sulfuric acid (CAS 7664-93-9)

Acute

Dermal

LD$_{50}$ | Rat | No data available

Inhalation

LC$_{50}$ | Rat | 0.375 mg/L

Oral

LD$_{50}$ | Rat | 2140 mg/kg
Skin corrosion/irritation  Causes severe skin burns
Serious eye damage/eye irritation Causes serious eye damage
Respiratory sensitization No data available
Skin sensitization No data available
Germ cell mutagenicity No data available
Carcinogenicity
IARC Monographs. Overall Evaluation of Carcinogenicity
Not classifiable
Not regulated
US National Toxicology Program (NTP) Report on Carcinogens
Not regulated
Reproductive toxicity This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity (single exposure) No data available
Specific target organ toxicity (repeated exposure) No data available
Aspiration hazard No data available

SECTION 12: Ecological information
Ecotoxicity This product is not classified as environmentally hazardous.
Persistence and degradability No data available
Bioaccumulative potential No data available
Mobility in soil No data available
Other adverse effects Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations
Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information
DOT
UN number UN3264
UN proper shipping name Corrosive liquid, acidic, inorganic, N.O.S. (Sulphuric acid)
Transport hazard class(es)
  Class 8
  Subsidiary risk Not listed
  Label(s) 8
Packing group III
Special precautions for user Read safety instructions, SDS, and emergency procedures before handling.
Special provisions IB3, T7, TP1, TP28
Packaging exceptions 154
Packaging, non-bulk 203
Packaging, bulk 241
IATA
UN number UN3264
UN proper shipping name Corrosive liquid, acidic, inorganic, N.O.S. (Sulphuric acid)
Transport hazard class(es)
  Class 8
  Subsidiary risk Not listed
  Packing group III
Environmental hazards
Marine pollutant No
Special provisions Not listed
ERG code 8L
Special precautions for user
Read safety instructions, SDS, and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed
Cargo aircraft only Allowed
IMDG
UN number UN3264
UN proper shipping name Corrosive liquid, acidic, inorganic, N.O.S. (Sulphuric acid)
Transport hazard class(es)
Class 8
Subsidiary risk Not listed
Packing group III
Environmental hazards
Marine pollutant Not listed
EmS F-A, S-B
Special precautions for user
Read safety instructions, SDS, and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
This substance/mixture is not intended to be transported in bulk.
DOT

IATA; IMDG

SECTION 15: Regulatory information
US federal regulations
CERCLA Hazardous Substance (40 CFR 302.4)
Chemical name CAS number Reportable Quantity
Sulfuric acid 7664-93-9 1000 lbs
Chemical name CAS number
Sulfuric acid 7664-93-9
Not regulated
SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)
Chemical name CAS number Reportable Quantity
Sulfuric acid 7664-93-9 1000 lbs
SARA 304 Emergency Release Notification
Chemical name CAS number Reportable Quantity
Sulfuric acid 7664-93-9 1000 lbs
SARA 311/312 Hazardous Chemical
Chemical name CAS number
Sulfuric acid 7664-93-9
SARA 313 (TRI reporting)
Not regulated
TSCA Section 8(b) Chemical Inventory
All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)
Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated

Safe Drinking Water Act (SDWA)
Not regulated

US state regulations
California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)
Not regulated

Massachusetts Right-to-Know Act
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
</tr>
</tbody>
</table>

New Jersey Worker and Community Right-to-Know Act
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
</tr>
</tbody>
</table>

Pennsylvania Worker and Community Right-to-Know Act
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
</tr>
</tbody>
</table>

Rhode Island Right-to-Know Act
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

NFPA Rating
- Health hazard: 1
- Fire hazard: 0
- Reactivity: 1
- Specific: N/A

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Issue date:
May 2015

Last revisions
November 2017
SAFETY DATA SHEET

SECTION 1: Identification

Product identifier
Product name
Product number
Recommended use and restrictions
Manufacturer

Calcium Buffer
R-0010
To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) Identification

Physical hazards
Corrosive to metals
Category 1
Health hazards
Eye damage/irritation
Category 1
Skin corrosion/irritation
Category 1B
Environmental hazards
No data available

Label elements
Hazard pictograms

Signal word
Danger
Hazard statements
May be corrosive to metals. Causes severe skin burns and eye damage.
Precautionary statements
Prevention
Keep only in original container. Do not breathe dusts or mists. Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur.
Response
Absorb spillage to prevent material damage. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a physician or poison control center. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
Continue rinsing. Immediately call a physician or poison control center.
Storage
Store in corrosive-resistant container with a corrosive-resistant inner liner. Keep tightly capped.
Store out of direct sunlight between 36°F–85°F. Store locked up.
Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified
No data available

SECTION 3: Composition/information on ingredients

Mixture
Chemical name
Common name and synonyms
CAS number
%
Water
Dihydrogen oxide
7732-18-5
95–99
Sodium hydroxide
Caustic soda
1310-73-2
0.1–5

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.
In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical attention if irritation develops. Chemical burns must be treated by a physician.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

If swallowed
Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
Suitable extinguishing media
Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media
Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
Fire hazard
Not flammable

Explosion hazard
Not explosive

Reactivity
May be corrosive to metals

Hazardous combustion products
Sodium oxides

Advice for firefighters
Precautionary measures
Exercise caution when fighting any chemical fire; hazardous fumes will be present.

Firefighting equipment/instructions
Use water spray or fog for cooling exposed containers.

Protection during firefighting
Do not enter fire area without proper protective equipment, including respiratory protection.

Other information
Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Small Spills: Absorb spillage with noncombustible, absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for reuse. Dilute base with water and neutralize with dilute acid. If not recoverable, dilute with water or flush to holding area and neutralize. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.
SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Store in corrosive-resistant container with a corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store locked up. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide (CAS 1310-73-2)</td>
<td>Ceiling</td>
<td>2 mg/m³</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide (CAS 1310-73-2)</td>
<td>Ceiling</td>
<td>2 mg/m³</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide (CAS 1310-73-2)</td>
<td>PEL</td>
<td>2 mg/m³</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s)

Exposure controls

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment

Eye/face protection
Wear appropriate chemical safety goggles if contact is likely to occur.

Skin protection
Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.

Body protection
Wear appropriate protective clothing.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>13.1</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>230°F (110°C)</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>17 mm Hg</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>0.6</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in all proportions</td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

Reactivity
May be corrosive to metals

Chemical stability
Stable under recommended handling and storage conditions (refer to section 7 of the SDS)

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use

Conditions to avoid
Contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials
Metal compounds, nitromethane, oxidizing agents, strong acids, and sugars

SECTION 11: Toxicological information

Information on toxicological effects

Inhalation
May cause irritation to the respiratory system

Skin contact
Causes severe skin burns

Eye contact
Causes serious eye damage

Ingestion
Causes digestive tract burns

Most important symptoms/effects, acute and delayed

Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring.

Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.

Acute toxicity
This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components

Sodium hydroxide (CAS 1310-73-2)

Acute

Oral

LD_{50}

Species
Rat

Test Results
140–340 mg/kg

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity (single exposure)
No data available

Specific target organ toxicity (repeated exposure)
No data available

Aspiration hazard
No data available

SECTION 12: Ecological information

This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.
SECTION 14: Transport information

DOT
- UN number: UN1824
- UN proper shipping name: Sodium hydroxide solution
- Transport hazard class(es):
  - Class: 8
  - Subsidiary risk: Not listed
  - Label(s): 8
- Packing group: II
- Special precautions for user: Read safety instructions, SDS, and emergency procedures before handling.
- Special provisions: A6, T14, TP2, TP27
- Packaging exceptions: Not listed
- Packaging, non-bulk: 201
- Packaging, bulk: 243

IATA
- UN number: UN1824
- UN proper shipping name: Sodium hydroxide solution
- Transport hazard class(es):
  - Class: 8
  - Subsidiary risk: Not listed
- Packing group: II
- Environmental hazards: Not listed
- ERG code: 8L
- Special precautions for user: Read safety instructions, SDS, and emergency procedures before handling.
- Other information:
  - Passenger and cargo: Allowed
  - Cargo aircraft only: Allowed

IMDG
- UN number: UN1824
- UN proper shipping name: Sodium hydroxide solution
- Transport hazard class(es):
  - Class: 8
  - Subsidiary risk: Not listed
- Packing group: II
- Environmental hazards: Not listed
- Marine pollutant: Not listed
- EmS: F-A, S-B
- Special precautions for user: Read safety instructions, SDS, and emergency procedures before handling.
- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: This substance/mixture is not intended to be transported in bulk

SECTION 15: Regulatory information

U.S. federal regulations
This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA Hazardous Substance (40 CFR 302.4)
Sodium hydroxide (CAS 1310-73-2)

U.S. state regulations
Massachusetts Right-to-Know Act
Sodium hydroxide (CAS 1310-73-2)

New Jersey Worker and Community Right-to-Know Act
Sodium hydroxide (CAS 1310-73-2)
SECTION 16: Other information

NFPA Rating
Health hazard 3
Fire hazard 0
Reactivity 1
Specific N/A

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Issue date:
May 2015

Last revisions
May 2016
SECTION 2: Hazard(s) identification

<table>
<thead>
<tr>
<th>Physical hazards</th>
<th>Flammable liquids</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazards</td>
<td>Eye damage/irritation</td>
<td>Category 2A</td>
</tr>
<tr>
<td></td>
<td>Specific target organ toxicity, single exposure</td>
<td>Category 3 Respiratory tract irritation</td>
</tr>
<tr>
<td></td>
<td>Specific target organ toxicity, single exposure</td>
<td>Category 3 Narcotic effects</td>
</tr>
</tbody>
</table>

Environmental hazards
Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements
Hazard pictograms

Signal word
Danger

Hazard statements
Highly flammable liquid and vapor. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statements

Prevention
Keep away from heat/sparks/open flames. -No smoking. Keep container tightly closed. Ground or bond container and receiving equipment. Use explosion-proof electrical/ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur. Wash skin thoroughly after handling. Avoid breathing mist or vapors. Use only outdoors or in a well-ventilated area.

Response
IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a physician or poison control center if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF EYE IRRITATION PERSISTS: Get medical advice/attention. IN CASE OF FIRE: Use alcohol-resistant foam, carbon dioxide, dry chemical powder, or water fog to extinguish.

Storage
Keep tightly capped. Store out of direct sunlight between 36°F−85°F. Store in a well-ventilated place. Store locked up.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified
Not applicable
SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>% w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethanolamine</td>
<td>2,2',2&quot;-Nitriolris(ethanol); Ethanol, 2,2',2&quot;- Nitriolris-</td>
<td>102-71-6</td>
<td>75–85</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>Isopropyl alcohol; 2-Propanol</td>
<td>67-63-0</td>
<td>15–25</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>0.1–1</td>
</tr>
</tbody>
</table>

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.

If swallowed
Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice.

Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, dry chemical powder, or water fog

Unsuitable extinguishing media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture

Fire hazard: Flammable liquid and vapor. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can be electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential static discharge, use proper bonding and grounding procedures. This material may be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment). Vapors are heavier than air and may spread along floors.

Explosion hazard: Vapors may form explosive mixtures with air. This material may be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment). Vapors are heavier than air and may spread along floors.

Reactivity: Hazardous reactions will not occur under normal conditions.

Hazardous combustion products: Carbon oxides, nitrogen oxides, and peroxides. Other irritating fumes and smoke.

Advice for firefighters

Precautionary measures: Exercise caution when fighting any chemical fire; hazardous fumes will be present.

Firefighting equipment/instructions: Use water spray or fog for cooling exposed containers.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other information: Refer to section 9 of the SDS for flammability properties.
SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Ventilate the contaminated area. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water to remove residual contamination. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Vapors may form explosive mixtures with air. Keep away from sources of ignition. NO SMOKING. Do not handle, store, or open near an open flame, sources of heat, or sources of ignition. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F−85°F. Store in a well-ventilated place. Store locked up. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US ACGIH Threshold Limit Values</th>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol (CAS 67-63-0)</td>
<td>STEL</td>
<td>980 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>492 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

US NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol (CAS 67-63-0)</td>
<td>ST</td>
<td>1225 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>980 mg/m³</td>
</tr>
<tr>
<td></td>
<td>IDLH</td>
<td>4920 mg/m³</td>
</tr>
</tbody>
</table>

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol (CAS 67-63-0)</td>
<td>PEL</td>
<td>980 mg/m³</td>
</tr>
</tbody>
</table>

Biological limit values

<table>
<thead>
<tr>
<th>ACGIH Biological Exposure Indices</th>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol (CAS 67-63-0)</td>
<td>40 mg/L</td>
<td></td>
<td>Acetone</td>
<td>Urine</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Exposure controls
Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment
Eye/face protection: Wear appropriate chemical safety goggles if contact is likely to occur.
Skin protection: Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection: Wear appropriate protective clothing.
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
</tr>
<tr>
<td>Form</td>
</tr>
<tr>
<td>Color</td>
</tr>
<tr>
<td>Odor</td>
</tr>
<tr>
<td>Odor threshold</td>
</tr>
<tr>
<td>pH</td>
</tr>
<tr>
<td>Evaporation rate</td>
</tr>
<tr>
<td>Melting point</td>
</tr>
<tr>
<td>Freezing point</td>
</tr>
<tr>
<td>Boiling point</td>
</tr>
<tr>
<td>Flash point</td>
</tr>
<tr>
<td>Specific gravity</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
</tr>
<tr>
<td>Decomposition temperature</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
</tr>
<tr>
<td>Vapor pressure</td>
</tr>
<tr>
<td>Relative vapor density</td>
</tr>
<tr>
<td>Solubility</td>
</tr>
<tr>
<td>Partition coefficient</td>
</tr>
<tr>
<td>(n-octanol/water)</td>
</tr>
<tr>
<td>Viscosity</td>
</tr>
<tr>
<td>Explosive properties</td>
</tr>
<tr>
<td>Oxidizing properties</td>
</tr>
<tr>
<td>Percent volatile</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

| Reactivity                                           | Hazardous reactions will not occur under normal conditions. |
| Chemical stability                                   | Stable under recommended handling and storage conditions (refer to section 7 of the SDS) |
| Possibility of hazardous reactions                   | No dangerous reaction known under conditions of normal use |
| Conditions to avoid                                  | Heat, sparks, open flames, and other ignition sources. Temperatures exceeding the flash point. Direct sunlight. Contact with incompatible materials. Do not use in areas without adequate ventilation. |
| Incompatible materials                               | Alkalis, chlorinated compounds, chlorine, metals, oxidizing agents, strong acids |
| Hazardous decomposition products                     | No hazardous decomposition under conditions of normal use. In the event of fire, see section 5 of the SDS. |
SECTION 11: Toxicological information

Information on toxicological effects

Inhalation
- May cause respiratory irritation. May cause drowsiness or dizziness.

Skin contact
- May cause slight or mild transient irritation

Eye contact
- Causes serious eye irritation

Ingestion
- May cause irritation, nausea, vomiting, and diarrhea

Most important symptoms/effects, acute and delayed

Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching.

Direct eye contact may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties. May cause drowsiness or dizziness. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness, and other central nervous system problems.

Ingestion may cause gastrointestinal irritation, nausea, vomiting, diarrhea, as well as depression of the central nervous system.

Acute toxicity

This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Acute Toxicity Estimate (ATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Indicator Liquid (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>LD₅₀</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>Rat</td>
<td>&gt;20 mg/L</td>
</tr>
<tr>
<td>LC₅₀</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>LD₅₀</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Acute Toxicity Data</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Isopropanol (CAS 67-63-0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>12,870 mg/kg</td>
</tr>
<tr>
<td>LD₅₀</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>Rat</td>
<td>72.6 mg/L</td>
</tr>
<tr>
<td>LC₅₀</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>5500 mg/kg</td>
</tr>
<tr>
<td>LD₅₀</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt;20,000 mg/kg</td>
</tr>
<tr>
<td>LD₅₀</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>Rat</td>
<td>No data available</td>
</tr>
<tr>
<td>LC₅₀</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>8000 mg/kg</td>
</tr>
<tr>
<td>LD₅₀</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
- May cause slight or mild transient irritation

Serious eye damage/eye irritation
- Causes serious eye irritation

Respiratory sensitization
- No data available

Skin sensitization
- No data available

Germ cell mutagenicity
- No data available

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity
- Not classifiable
Not regulated

US National Toxicology Program (NTP) Report on Carcinogens
Not regulated

Reproductive toxicity          No data available
Specific target organ toxicity (single exposure)  May cause drowsiness or dizziness. May cause respiratory irritation.
Specific target organ toxicity (repeated exposure) No data available
Aspiration hazard             No data available

SECTION 12: Ecological information
Ecotoxicity                   This product is not classified as environmentally hazardous.
Persistence and degradability No data available
Bioaccumulative potential     No data available
Mobility in soil              No data available
Other adverse effects         Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations
Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information
DOT
UN number                     UN1993
UN proper shipping name       Flammable liquids, N.O.S. (Isopropanol)
Transport hazard class(es)    
   Class                        3
   Subsidiary risk              Not listed
   Label(s)                    3
   Packing group               II
Special precautions for user  Read safety instructions, SDS, and emergency procedures before handling.
Special provisions            IB2, T7, TP1, TP8, TP28
Packaging exceptions          150
Packaging, non-bulk           202
Packaging, bulk               242

IATA
UN number                     UN1993
UN proper shipping name       Flammable liquids, N.O.S. (Isopropanol)
Transport hazard class(es)    
   Class                        3
   Subsidiary risk              Not listed
   Packing group               II
Environmental hazards         
   Marine pollutant            Not listed
Special provisions            8L
ERG code                      
Special precautions for user  Read safety instructions, SDS, and emergency procedures before handling.
Other information             
   Passenger and cargo aircraft Allowed
   Cargo aircraft only         Allowed
IMDG

UN number UN1993
UN proper shipping name Flammable liquids, N.O.S. (Isopropanol)
Transport hazard class(es)
  Class 3
  Subsidiary risk Not listed
Packing group II
Environmental hazards
  Marine pollutant Not listed
EmS F-E, S-E
Special precautions for user Read safety instructions, SDS, and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
  This substance/mixture is not intended to be transported in bulk.

DOT

IATA; IMDG

SECTION 15: Regulatory information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)
  Not regulated
  Chemical name CAS number
  Isopropanol 67-63-0
  Triethanolamine 102-71-6
  Not regulated
SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)
  Not regulated
SARA 304 Emergency Release Notification
  Not regulated
SARA 311/312 Hazardous Chemical
  Chemical name CAS number
  Isopropanol 67-63-0
  Triethanolamine 102-71-6
SARA 313 (TRI reporting)
  Not regulated
TSCA Section 8(b) Chemical Inventory
  All components are on the U.S. EPA TSCA Inventory list.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
  Not regulated
SECTION 16: Other information

**NFPA Rating**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard</td>
<td>1</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>3</td>
</tr>
<tr>
<td>Reactivity</td>
<td>1</td>
</tr>
<tr>
<td>Specific</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Disclaimer**

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy of completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

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**Issue date:**
June 2015

**Last revisions**
October 2017
SAFETY DATA SHEET


SECTION 1: Identification

Product identifier

Product name
Hardness Reagent

Product number
R-0012

Recommended use and restrictions
To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.

Manufacturer
Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification

Physical hazards
Not applicable

Health hazards
Not applicable

Environmental hazards
Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.

Label elements
Hazard pictograms
Not applicable

Signal word
Not applicable

Hazard statements
Not applicable

Precautionary statements
Prevention
Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.

Response
This reagent is not defined as a hazardous chemical per OSHA’s Hazard Communication Standard 2012; however, use care when handling.

Storage
Keep tightly capped. Store out of direct sunlight between 36°F−85°F.

Disposal
Not applicable

Hazard not otherwise classified
Not applicable

SECTION 3: Composition/information on ingredients

Mixture

Chemical name
Water

Common name and synonyms
Dihydrogen oxide

CAS number
7732-18-5

% w/w
97–100

Ethylenediaminetetraacetic acid disodium salt dihydrate

CAS number
6381-92-6

% w/w
0.1–2

Other components below reportable levels
Not applicable

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.
If swallowed
Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
Fire hazard Not flammable
Explosion hazard Not explosive
Reactivity Hazards reactions will not occur under normal conditions.
Hazardous combustion products Carbon oxides, nitrogen oxides, sodium oxides. Other irritating fumes and smoke.

Advice for firefighters
Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.
Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits
US ACGIH Threshold Limit Values
Not regulated
US NIOSH: Pocket Guide to Chemical Hazards
Not regulated
US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Not regulated

Biological limit values

No biological exposure limits noted for the ingredient(s)

Exposure controls

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment

Eye/face protection

Wear appropriate chemical safety goggles if contact is likely to occur.

Skin protection

Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.

Body protection

Wear appropriate protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Odor</td>
</tr>
<tr>
<td>Odor threshold</td>
</tr>
<tr>
<td>pH</td>
</tr>
<tr>
<td>Evaporation rate</td>
</tr>
<tr>
<td>Melting point</td>
</tr>
<tr>
<td>Freezing point</td>
</tr>
<tr>
<td>Boiling point</td>
</tr>
<tr>
<td>Flash point</td>
</tr>
<tr>
<td>Specific gravity</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
</tr>
<tr>
<td>Decomposition temperature</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
</tr>
<tr>
<td>Vapor pressure</td>
</tr>
<tr>
<td>Relative vapor density</td>
</tr>
<tr>
<td>Solubility</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
</tr>
<tr>
<td>Viscosity</td>
</tr>
<tr>
<td>Explosive properties</td>
</tr>
<tr>
<td>Oxidizing properties</td>
</tr>
<tr>
<td>Percent volatile</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

Reactivity

Hazardous reactions will not occur under normal conditions.

Chemical stability

Stable under recommended handling and storage conditions (refer to section 7 of the SDS)

Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use

Conditions to avoid

Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials

Oxidizing agents, metals, strong acids.

Hazardous decomposition products

No hazardous decomposition products under normal conditions.

SECTION 11: Toxicological information

Information on toxicological effects

Inhalation

May cause irritation to the respiratory system

Skin contact

May cause slight or mild transient irritation

Eye contact

May cause slight or mild transient irritation

Ingestion

May cause irritation, nausea, vomiting, and diarrhea

Most important symptoms/effects, acute and delayed

Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching.

Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Acute toxicity

This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Acute Toxicity Estimate (ATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness Reagent (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD&lt;sub&gt;50&lt;/sub&gt;</td>
<td>Rat</td>
<td>Not available</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC&lt;sub&gt;50&lt;/sub&gt;</td>
<td>Rat</td>
<td>Not available</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD&lt;sub&gt;50&lt;/sub&gt;</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Acute Toxicity Data</td>
</tr>
<tr>
<td>EDTA disodium salt, anhydrous  (CAS 6381-92-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD&lt;sub&gt;50&lt;/sub&gt;</td>
<td>Rat or Rabbit</td>
<td>Not available</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC&lt;sub&gt;50&lt;/sub&gt;</td>
<td>Rat</td>
<td>Not available</td>
</tr>
<tr>
<td>Oral</td>
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<tr>
<td>LD&lt;sub&gt;50&lt;/sub&gt;</td>
<td>Rat</td>
<td>&gt;2000 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation

May cause slight or mild transient irritation

Serious eye damage/eye irritation

May cause slight or mild transient irritation

Respiratory sensitization

No data available

Skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not classifiable


Not regulated

US National Toxicology Program (NTP) Report on Carcinogens

Not regulated

Reproductive toxicity

No data available

Specific target organ toxicity

No data available

Hardness Reagent; R-0012
SECTION 12: Ecological information

Specific target organ toxicity (repeated exposure) No data available
Aspiration hazard No data available

Ecotoxicity This product is not classified as environmentally hazardous.
Persistence and degradability No data available
Bioaccumulative potential No data available
Mobility in soil No data available
Other adverse effects Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

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IATA Not regulated as dangerous goods
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SARA 313 (TRI reporting) Not regulated
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Massachusetts Right-to-Know Act
Not regulated

New Jersey Worker and Community Right-to-Know Act
Not regulated

Pennsylvania Worker and Community Right-to-Know Act
Not regulated

Rhode Island Right-to-Know Act
Not regulated

SECTION 16: Other information

NFPA Rating
- Health hazard: 0
- Fire hazard: 0
- Reactivity: 0
- Specific: N/A

Disclaimer
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Issue date:
May 2015

Last revisions
September 2017
SAFETY DATA SHEET

SECTION 1: Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Cyanuric Acid Reagent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product number</td>
<td>R-0013</td>
</tr>
</tbody>
</table>

Recommended use and restrictions
To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.

Manufacturer
Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) Identification

<table>
<thead>
<tr>
<th>Physical hazards</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazards</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.</td>
</tr>
</tbody>
</table>

Label elements

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Hazard statements</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Precautionary statements</td>
<td></td>
</tr>
<tr>
<td>Prevention</td>
<td>Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.</td>
</tr>
<tr>
<td>Response</td>
<td>This reagent is not defined as a hazardous chemical per OSHA’s Hazard Communication Standard 2012; however, use care when handling.</td>
</tr>
<tr>
<td>Storage</td>
<td>Keep tightly capped. Store out of direct sunlight between 36°F–85°F.</td>
</tr>
<tr>
<td>Disposal</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Hazards not otherwise classified</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>% w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Dihydrogen oxide</td>
<td>7732-18-5</td>
<td>99–100</td>
<td></td>
</tr>
<tr>
<td>1,3,5-Triazine-2,4,6-triamine</td>
<td>Melamine; Cyanuramide</td>
<td>108-78-1</td>
<td>0.1–1</td>
<td></td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>0.1–1</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: First-aid measures

If inhaled
Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact
Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

If swallowed
Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.
Most important symptoms and effects, both acute and delayed
Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media
Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture
Fire hazard Not flammable
Explosion hazard Not explosive
Reactivity Hazardous reactions will not occur under normal conditions.
Hazardous combustion products Carbon oxides, nitrogen oxides, hydrogen cyanide, magnesium oxides. Other irritating fumes and smoke.

Advice for firefighters
Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.
Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures
Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up
Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections
For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Personal precautions, protective equipment, and emergency procedures
Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities
Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits
US ACGIH Threshold Limit Values
Not regulated
US NIOSH: Pocket Guide to Chemical Hazards
Not regulated
US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Not regulated
Biological limit values
No biological exposure limits noted for the ingredient(s)

Exposure controls
Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment
Eye/face protection
Wear appropriate chemical safety goggles if contact is likely to occur.

Skin protection
Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.

Body protection
Wear appropriate protective clothing.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| Physical state | Liquid |
| Form | Liquid |
| Color | Clear, colorless or nearly colorless |
| Odor | Odorless |
| Odor threshold | Not applicable |
| pH | 5.8 |
| Evaporation rate | No data available |
| Melting point | Not applicable |
| Freezing point | No data available |
| Boiling point | 212°F (100°C) |
| Flash point | Not applicable |
| Specific gravity | 1.04 |
| Auto-ignition temperature | Not applicable |
| Decomposition temperature | No data available |
| Flammability (solid, gas) | Not applicable |
| Upper Flammability Limit | Not applicable |
| Lower Flammability Limit | Not applicable |
| Vapor pressure | 17 mm Hg |
| Relative vapor density | 0.6 |
| Solubility | Soluble in all proportions |
| Partition coefficient (n-octanol/water) | No data available |
| Viscosity | No data available |
| Explosive properties | Not applicable |
| Oxidizing properties | Not applicable |
| Percent volatile | 99% |

SECTION 10: Stability and reactivity

Reactivity
Hazardous reactions will not occur under normal conditions.

Chemical stability
Stable under recommended handling and storage conditions (refer to section 7 of the SDS)

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use

Conditions to avoid
Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials: Oxidizing agents, strong acids.
Hazardous decomposition products: No hazardous decomposition products under normal conditions.

SECTION 11: Toxicological information

Information on toxicological effects:

- **Inhalation**: May cause irritation to the respiratory system.
- **Skin contact**: May cause slight or mild transient irritation.
- **Eye contact**: May cause slight or mild transient irritation.
- **Ingestion**: May cause irritation, nausea, vomiting, and diarrhea.

Most important symptoms/effects, acute and delayed:

- **Direct skin contact** may cause slight or mild transient irritation. Symptoms may include redness and itching.
- **Direct eye contact** may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
- **Inhalation of mists** can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.
- **Ingestion** may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Acute toxicity:

This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

### Product: Cyanuric Acid Reagent (CAS Mixture)

**Acute**

- **Dermal**
  - LD$_{50}$ Rabbit: >5000 mg/kg
- **Inhalation**
  - LC$_{50}$ Rat: Not available
- **Oral**
  - LD$_{50}$ Rat: >5000 mg/kg

### Components: 1,3,5-Triazine-2,4,6-triamine (CAS 108-78-1)

**Acute**

- **Dermal**
  - LD$_{50}$ Rabbit: >1000 mg/kg
- **Inhalation**
  - LC$_{50}$ Rat: Not available
- **Oral**
  - LD$_{50}$ Rat: 3160 mg/kg

**Skin corrosion/irritation**: May cause slight or mild transient irritation.

**Serious eye damage/eye irritation**: May cause slight or mild transient irritation.

**Respiratory sensitization**: No data available.

**Skin sensitization**: No data available.

**Germ cell mutagenicity**: No data available.

**Carcinogenicity**

- **IARC Monographs. Overall Evaluation of Carcinogenicity**: Not classifiable.
- **US National Toxicology Program (NTP) Report on Carcinogens**: Not regulated.

**Reproductive toxicity**: No data available.

**Specific target organ toxicity (single exposure)**: No data available.
Specific target organ toxicity
(repeated exposure)  No data available
Aspiration hazard  No data available

SECTION 12: Ecological information
Ecotoxicity  This product is not classified as environmentally hazardous.
Persistence and degradability  No data available
Bioaccumulative potential  No data available
Mobility in soil  No data available
Other adverse effects  Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations
Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

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DOT  Not regulated as dangerous goods
IATA  Not regulated as dangerous goods
IMDG  Not regulated as dangerous goods

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Rhode Island Right-to-Know Act
Not regulated

SECTION 16: Other information

NFPA Rating

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard</td>
<td>0</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
<tr>
<td>Specific</td>
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