SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form: Substance
Physical state: Solid
Substance name: TRIPHENYLHYDROXYTIN, tech-90
Product code: SNT8680
Formula: C18H16OSn
Synonyms: FENTIN HYDROXIDE; TRIPHENYLHYDROXYSTANNANE; TRIPHENYLTIN HYDROXIDE
Chemical family: ORGANOTIN

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture: Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 3: H301
Acute toxicity (dermal), Category 3: H311
Acute toxicity (inhalation:dust,mist) Category 2: H330
Skin corrosion/irritation, Category 2: H315
Serious eye damage/eye irritation, Category 1: H318
Carcinogenicity, Category 2: H351
Reproductive toxicity, Category 2: H361
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation: H335
Specific target organ toxicity — Repeated exposure, Category 1: H372
Hazardous to the aquatic environment — Acute Hazard, Category 1: H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1: H410

Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available
2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP):

- GHS05
- GHS06
- GHS08
- GHS09

Signal word (CLP): Danger

Hazard statements (CLP):
- H301: Toxic if swallowed or in contact with skin
- H311: Causes skin irritation.
- H315: Causes serious eye damage.
- H330: Fatal if inhaled.
- H335: May cause respiratory irritation.
- H351: Suspected of causing cancer.
- H361: Suspected of damaging fertility or the unborn child.
- H372: Causes damage to organs through prolonged or repeated exposure.
- H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP):
- P202: Do not handle until all safety precautions have been read and understood.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P260: Do not breathe dust.
- P310: Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-constituent</td>
<td>TRIPHENYLHYDROXYTIN, tech-90</td>
<td>76-87-9</td>
<td>200-990-6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triphenyltin hydroxide</td>
<td>(CAS-No.) 76-87-9 (EC-No.) 200-990-6 (EC Index No.) 050-004-00-1</td>
<td>95 - 100</td>
<td>Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation), H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 Carc. 2, H351 Repr. 2, H361d STOT SE 3, H335 STOT RE 1, H372 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>Other Organotins</td>
<td></td>
<td>0 - 5</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label. Call a POISON CENTER/doctor.

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of water/…. Get immediate medical advice/attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
TRIPHENYLHYDROXYTIN, tech-90
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First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects: Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation: Fatal if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact: Fatal in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Causes skin irritation. Organotins may be absorbed through the skin.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed
Note to physician: Application of corticosteroid creams has been effective in treating severe skin irritation. If blisters develop, they may require abrasion to promote healing.

SECTION 5: Firefighting measures
5.1. Extinguishing media
Unsuitable extinguishing media: Do not use straight streams.
5.2. Special hazards arising from the substance or mixture
Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
5.3. Advice for firefighters
Firefighting instructions: Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Protective equipment: Wear protective equipment as described in Section 8.
Emergency procedures: Evacuate unnecessary personnel.
6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up: Collect spillage. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Do not breathe dust. Avoid dust formation. Provide local exhaust or general room ventilation to minimize exposure to dust. Use only outdoors or in a well-ventilated area.
Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container tightly closed. Store locked up.
Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)
No additional information available
SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Other Organotins</th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>0.1 mg/m³ as tin</td>
<td>0.1 mg/m³ as tin</td>
</tr>
<tr>
<td>USA OSHA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Triphenyltin hydroxide (76-87-9)**

<table>
<thead>
<tr>
<th>Other Organotins</th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>0.1 mg/m³ as tin</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>0.1 mg/m³ as tin</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

**Appropriate engineering controls:**

Provide local exhaust or general room ventilation. Handle in an enclosing hood with exhaust ventilation. Insure that exhaust is vented properly - caustic scrubbing is recommended.

**Personal protective equipment:**

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

**Hand protection:**

Neoprene or nitrile rubber gloves

**Eye protection:**

Chemical goggles. Contact lenses should not be worn

**Skin and body protection:**

Wear suitable protective clothing

**Respiratory protection:**

In case of inadequate ventilation wear respiratory protection. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- **Physical state**: Solid
- **Appearance**: Powder.
- **Molecular mass**: 367.02 g/mol
- **Colour**: White.
- **Odour**: No data available
- **Odour threshold**: No data available
- **Refractive index**: No additional information available
- **pH**: No data available
- **Relative evaporation rate (butylacetate=1)**: No data available
- **Melting point**: 128 °C
- **Freezing point**: No data available
- **Boiling point**: No data available
- **Flash point**: > 110 °C
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Flammability (solid, gas)**: No data available
- **Vapour pressure**: 25 mm Hg @ 170°C
- **Relative vapour density at 20 °C**: No data available
- **Relative density**: 1.186
- **% Volatiles**: < 3 %
- **Solubility**: Insoluble in water.
- **Log Pow**: No data available
- **Log Kow**: No data available
- **Viscosity, kinematic**: No data available
- **Viscosity, dynamic**: No data available
- **Explosive properties**: No data available
TRIPHENYLHYDROXYTIN, tech-90
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<table>
<thead>
<tr>
<th>Oxidising properties</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
Acids. Oxidizing agent.

10.6. Hazardous decomposition products
Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Toxic if swallowed. Toxic in contact with skin. Fatal if inhaled.

<table>
<thead>
<tr>
<th>TRIPHENYLHYDROXYTIN, tech-90 (76-87-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE CLP (oral)</td>
</tr>
<tr>
<td>ATE CLP (dermal)</td>
</tr>
<tr>
<td>ATE CLP (dust,mist)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Triphenyltin hydroxide (76-87-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye damage.
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Mutagenic data has been reported.
Carcinogenicity: Suspected of causing cancer.
Reproductive toxicity: Suspected of damaging fertility or the unborn child.
Triphenyltin hydroxide is an experimental teratogen.
STOT-single exposure: May cause respiratory irritation.
STOT-repeated exposure: Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard: Not classified
Symptoms/effects after inhalation: Fatal if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact: Fatal in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Causes skin irritation. Organotins may be absorbed through the skin.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Very toxic to aquatic life.
Acute aquatic toxicity: Very toxic to aquatic life.
Chronic aquatic toxicity: Very toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Triphenyltin hydroxide (76-87-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
</tbody>
</table>
Triphenyltin hydroxide (76-87-9)

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations: Do not dispose of waste into sewer.

Product/Packaging disposal recommendations: Dispose of solid materials or residues at a licensed site. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

| UN-No. (ADR) | 3146 |
| UN-No. (IMDG) | 3146 |
| UN-No. (IATA) | 3146 |
| UN-No. (ADN) | 3146 |
| UN-No. (RID) | 3146 |

14.2. UN proper shipping name

| Proper Shipping Name (ADR) | ORGANOTIN COMPOUND, SOLID, N.O.S. |
| Proper Shipping Name (IMDG) | ORGANOTIN COMPOUND, SOLID, N.O.S. |
| Proper Shipping Name (IATA) | Organotin compound, solid, n.o.s. |
| Proper Shipping Name (ADN) | ORGANOTIN COMPOUND, SOLID, N.O.S. |
| Proper Shipping Name (RID) | ORGANOTIN COMPOUND, SOLID, N.O.S. |

Transport document description (ADR): UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (TRIPHENYLHYDROXYTIN), 6.1, II, (D/E), ENVIRONMENTALLY HAZARDOUS

Transport document description (IMDG): UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (TRIPHENYLHYDROXYTIN), 6.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

Transport document description (IATA): UN 3146 Organotin compound, solid, n.o.s. (TRIPHENYLHYDROXYTIN), 6.1, II, ENVIRONMENTALLY HAZARDOUS

Transport document description (ADN): UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (TRIPHENYLHYDROXYTIN), 6.1, II, ENVIRONMENTALLY HAZARDOUS

Transport document description (RID): UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (TRIPHENYLHYDROXYTIN), 6.1, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR): 6.1
Danger labels (ADR): 6.1
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IMDG
Transport hazard class(es) (IMDG) : 6.1
Danger labels (IMDG) : 6.1

IATA
Transport hazard class(es) (IATA) : 6.1
Hazard labels (IATA) : 6.1

ADN
Transport hazard class(es) (ADN) : 6.1
Danger labels (ADN) : 6.1

RID
Transport hazard class(es) (RID) : 6.1
Danger labels (RID) : 6.1

14.4. Packing group
Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards
Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : No supplementary information available

14.6. Special precautions for user
- Overland transport
Classification code (ADR) : T3
Special provisions (ADR) : 43, 274
Limited quantities (ADR) : 500g
Excepted quantities (ADR) : E4
Packing instructions (ADR) : P002, IBC08
Special packing provisions (ADR) : B3
Mixed packing provisions (ADR) : MP10
TRIPHENYLHYDROXYTIN, tech-90
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<table>
<thead>
<tr>
<th>Portable tank and bulk container instructions (ADR)</th>
<th>T3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portable tank and bulk container special provisions (ADR)</td>
<td>TP33</td>
</tr>
<tr>
<td>Tank code (ADR)</td>
<td>SGAH, L4BH</td>
</tr>
<tr>
<td>Tank special provisions (ADR)</td>
<td>TU15, TE19</td>
</tr>
<tr>
<td>Vehicle for tank carriage</td>
<td>AT</td>
</tr>
<tr>
<td>Transport category (ADR)</td>
<td>2</td>
</tr>
<tr>
<td>Special provisions for carriage - Packages (ADR)</td>
<td>V11</td>
</tr>
<tr>
<td>Special provisions for carriage - Loading, unloading and handling (ADR)</td>
<td>CV13, CV28</td>
</tr>
<tr>
<td>Special provisions for carriage - Operation (ADR)</td>
<td>S9, S19</td>
</tr>
<tr>
<td>Hazard identification number (Kemler No.)</td>
<td>60</td>
</tr>
<tr>
<td>Orange plates</td>
<td>60 3146</td>
</tr>
</tbody>
</table>

| Tunnel restriction code (ADR) | D/E |
| EAC code | 2X |

**- Transport by sea**

| Special provisions (IMDG) | 43, 274 |
| Limited quantities (IMDG) | 500 g |
| Excepted quantities (IMDG) | E4 |
| Packing instructions (IMDG) | P002 |
| IBC packing instructions (IMDG) | IBC08 |
| IBO special provisions (IMDG) | B2, B4 |
| Tank instructions (IMDG) | T3 |
| Tank special provisions (IMDG) | TP33 |
| EmS-No. (Fire) | F-A |
| EmS-No. (Spillage) | S-A |
| Stowage category (IMDG) | A |
| Stowage and handling (IMDG) | SW2 |
| Properties and observations (IMDG) | A wide variety of toxic solids. Toxic if swallowed, by skin contact or by inhalation. |

**- Air transport**

| PCA Excepted quantities (IATA) | E4 |
| PCA Limited quantities (IATA) | Y644 |
| PCA limited quantity max net quantity (IATA) | 1kg |
| PCA packing instructions (IATA) | 669 |
| PCA max net quantity (IATA) | 25kg |
| CAO packing instructions (IATA) | 676 |
| CAO max net quantity (IATA) | 100kg |
| Special provisions (IATA) | A3, A4, A6 |
| ERG code (IATA) | 6L |

**- Inland waterway transport**

| Classification code (ADN) | T3 |
| Special provisions (ADN) | 43, 274, 802 |
| Limited quantities (ADN) | 500 g |
| Excepted quantities (ADN) | E4 |
| Equipment required (ADN) | PP, EP |
| Number of blue cones/lights (ADN) | 2 |

**- Rail transport**

| Classification code (RID) | T3 |
| Special provisions (RID) | 43, 274 |
| Limited quantities (RID) | 500g |
| Excepted quantities (RID) | E4 |
TRIPHENYLHYDROXYTIN, tech-90
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Packing instructions (RID) : P002, IBC08
Special packing provisions (RID) : B4
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T3
Portable tank and bulk container special provisions (RID) : TP33
Tank codes for RID tanks (RID) : SGAH, L4BH
Special provisions for RID tanks (RID) : TU15
Transport category (RID) : 2
Special provisions for carriage – Packages (RID) : W11
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28, CW31
Colis express (express parcels) (RID) : CE9
Hazard identification number (RID) : 60

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
TRIPHENYLHYDROXYTIN, tech-90 is not on the REACH Candidate List
TRIPHENYLHYDROXYTIN, tech-90 is not on the REACH Annex XIV List
Fentin hydroxide is subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

% Volatiles : < 3 %

15.1.2. National regulations

Germany
Reference to AwSV : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 506)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijs van kankerverwekkende stoffen : The substance is not listed
SZW-lijs van mutage stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : TRIPHENYLHYDROXYTIN, tech-90 is listed

Denmark
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

SECTION 16: Other information

Abbreviations and acronyms:
TRIPHENYLHYDROXYTIN, tech-90
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Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

| Acute Tox. 2 (Inhalation) | Acute toxicity (inhal.), Category 2 |
| Acute Tox. 2 (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Category 2 |
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal), Category 3 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Carc. 2 | Carcinogenicity, Category 2 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Repr. 2 | Reproductive toxicity, Category 2 |
| Repr. 2 | Reproductive toxicity, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT RE 1 | Specific target organ toxicity — Repeated exposure, Category 1 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H301 | Toxic if swallowed |
| H311 | Toxic in contact with skin |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H330 | Fatal if inhaled |
| H335 | May cause respiratory irritation |
| H351 | Suspected of causing cancer |
| H361 | Suspected of damaging fertility or the unborn child |
| H361d | Suspected of damaging the unborn child |
| H372 | Causes damage to organs through prolonged or repeated exposure |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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