1. Identification

Product identifier: Mirex

Other means of identification

- **Product code:** N-12486
- **Synonym(s):** Dechlorane
- **Recommended use:** For Laboratory Use Only
- **Recommended restrictions:** None known.

Manufacturer/Importer/Supplier/Distributor information

**Manufacturer**

- **Company name:** Chem Service, Inc.
- **Address:** 660 Tower Lane
  West Chester, PA 19380
  United States
- **Telephone**
  - Toll Free: 800-452-9994
  - Direct: 610-692-3026
- **Website:** www.chemservice.com
- **E-mail:** info@chemservice.com
- **Emergency phone number**
  - Chemtrec US: 800-424-9300
  - Chemtrec outside US: +1 703-527-3887

2. Hazard(s) identification

**Physical hazards**

Not classified.

**Health hazards**

- **Acute toxicity, oral:** Category 4
- **Acute toxicity, dermal:** Category 3
- **Carcinogenicity:** Category 2
- **Reproductive toxicity (fertility, the unborn child):** Category 2
- **Reproductive toxicity:** Effects on or via lactation

**Environmental hazards**

- **Hazardous to the aquatic environment, acute hazard:** Category 1
- **Hazardous to the aquatic environment, long-term hazard:** Category 1

**OSHA defined hazards**

Not classified.

**Label elements**

- **Signal word:** Danger
- **Hazard statement:** Harmful if swallowed. Toxic in contact with skin. Suspected of causing cancer. Suspected of damaging fertility. Suspected of damaging the unborn child. May cause harm to breast-fed children. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

If swallowed: Call a poison center/doctor if you feel unwell. If on skin: Wash with plenty of water. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Specific treatment (see this label). Rinse mouth. Take off immediately all contaminated clothing and wash it before reuse. Collect spillage.

**Storage**

Store locked up.

**Disposal**

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

**Hazard(s) not otherwise classified (HNOC)**

None known.
3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mirex</td>
<td>Dechlorane</td>
<td>2385-85-5</td>
<td>100</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Take off immediately all contaminated clothing. Wash off with soap and plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion**
Rinse mouth. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

**Most important symptoms/effects, acute and delayed**
Direct contact with eyes may cause temporary irritation.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**
Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

**Suitable extinguishing media**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire-fighting equipment/instructions**
Use water spray to cool unopened containers.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**
No unusual fire or explosion hazards noted.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. 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 protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**
This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Collect spillage. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

**Environmental precautions**
Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

**Precautions for safe handling**
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Avoid contact during pregnancy/while nursing. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Do not empty into drains.

**Conditions for safe storage, including any incompatibilities**
Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

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

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.

Individual protection measures, such as personal protective equipment
Eye/face protection
Use personal protective equipment as required. Wear eye/face protection.

Skin protection
Hand protection
Wear protective gloves.

Other
Wear appropriate chemical resistant clothing.

Respiratory protection
Use personal protective equipment as required.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
Physical state: Solid.
Form: Crystalline Solid
Color: White
Odor: Not available.
Odor threshold: Not available.
pH: Not available.
Melting point/freezing point: 905 °F (485 °C)
Initial boiling point and boiling range: Not available.
Flash point: Not available.
Evaporation rate: Not available.
Flammability (solid, gas): Not available.

Upper/lower flammability or explosive limits
Flammability limit - lower (%): Not available.
Flammability limit - upper (%): Not available.
Explosive limit - lower (%): Not available.
Explosive limit - upper (%): Not available.

Vapor pressure: 0 kPa at 25 °C
Vapor density: Not available.
Relative density: Not available.

Solubility(ies)
Solubility (water): Insoluble

Partition coefficient (n-octanol/water): 5.3

Auto-ignition temperature: Not available.
Decomposition temperature: > 932 °F (> 500 °C)
Viscosity: Not available.

Other information
Molecular formula: C10-Cl12
Molecular weight: 545.59 g/mol

10. Stability and reactivity
Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid
Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion
Harmful if swallowed.

Inhalation
No adverse effects due to inhalation are expected.

Skin contact
Toxic in contact with skin.

Eye contact
Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics
Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity
Toxic in contact with skin. Harmful if swallowed.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mirex (CAS 2385-85-5)</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>Rabbit</td>
<td>800 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>2000 mg/kg</td>
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<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Dog</td>
<td>1000 mg/kg</td>
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<tr>
<td></td>
<td>Hamster</td>
<td>125 mg/kg</td>
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<tr>
<td></td>
<td>Rat</td>
<td>306 mg/kg</td>
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<td>Other</td>
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<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>800 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>365 mg/kg</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation
Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation
Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization
Not available.

Skin sensitization
This product is not expected to cause skin sensitization.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
Not available.

IARC Monographs. Overall Evaluation of Carcinogenicity
Mirex (CAS 2385-85-5) 2B Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens
Mirex (CAS 2385-85-5) Reasonably Anticipated to be a Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Reproductive toxicity
May cause harm to breastfed babies. Suspected of damaging the unborn child. Suspected of damaging fertility.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not available.

Chronic effects
Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity
Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.
Mirex (CAS 2385-85-5)

Aquatic

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crustacea EC50</td>
<td>Water flea (Daphnia pulex) &gt; 0.1 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish LC50</td>
<td>Bluegill (Lepomis macrochirus) &gt; 20 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential
Not available.

Partition coefficient n-octanol / water (log Kow)
5.28

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations
Dispose in accordance with all applicable regulations.

Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN2811</th>
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<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Toxic solids, organic, n.o.s. (Mirex), MARINE POLLUTANT</td>
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<tr>
<td>Transport hazard class(es)</td>
<td>6.1(PGIII)</td>
</tr>
<tr>
<td>Class</td>
<td>6.1(PGIII)</td>
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<tr>
<td>Subsidiary risk</td>
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<td>Label(s)</td>
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<td>Packing group</td>
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<td>Environment hazards</td>
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<td>Marine pollutant</td>
<td>Yes</td>
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<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Special provisions</td>
<td>IB8, IP3, T1, TP33</td>
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<tr>
<td>Packaging exceptions</td>
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</tr>
<tr>
<td>Packaging non bulk</td>
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<tr>
<td>Packaging bulk</td>
<td>240</td>
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</table>

IATA

<table>
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<tr>
<th>UN number</th>
<th>UN2811</th>
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<tr>
<td>UN proper shipping name</td>
<td>Toxic solid, organic, n.o.s. (Mirex)</td>
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<tr>
<td>Transport hazard class(es)</td>
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<tr>
<td>Class</td>
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<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
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<tr>
<td>Environment hazards</td>
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<tr>
<td>ERG Code</td>
<td>6L</td>
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<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Other information</td>
<td>Allowed.</td>
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</tbody>
</table>

IMDG

<table>
<thead>
<tr>
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<th>UN2811</th>
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<tr>
<td>UN proper shipping name</td>
<td>Toxic solid, organic, n.o.s. (Mirex)</td>
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<tr>
<td>Transport hazard class(es)</td>
<td>6.1(PGIII)</td>
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<tr>
<td>Class</td>
<td>6.1(PGIII)</td>
</tr>
<tr>
<td>Subsidiary risk</td>
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<tr>
<td>Packing group</td>
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<tr>
<td>Environment hazards</td>
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<td>ERG Code</td>
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<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
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<tr>
<td>Other information</td>
<td>Allowed.</td>
</tr>
</tbody>
</table>
### UN proper shipping name
TOXIC SOLID, ORGANIC, N.O.S. (Mirex), MARINE POLLUTANT

### Transport hazard class(es)
- **Class**: 6.1(PGIII)
- **Subsidiary risk**: -
- **Packing group**: III
- **Environmental hazards**: -
- **Marine pollutant**: Yes
- **EmS**: F-A, S-A

### Special precautions for user
Read safety instructions, SDS and emergency procedures before handling. Not applicable.

### Transport in bulk according to
Annex II of MARPOL 73/78 and the IBC Code
- DOT
- IATA; IMDG

### Marine pollutant

---

**15. Regulatory information**

**US federal regulations**
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
One or more components are not listed on TSCA.

- **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**
  Not regulated.
- **CERCLA Hazardous Substance List (40 CFR 302.4)**
  Not listed.
- **SARA 304 Emergency release notification**
  Not regulated.
  Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

- **Hazard categories**
  - Immediate Hazard - Yes
  - Delayed Hazard - Yes
  - Fire Hazard - No
  - Pressure Hazard - No
  - Reactivity Hazard - No
Material name: Mirex
13928 Version #: 01 Issue date: 12-19-2014

SDS US
7 / 8

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
Yes

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
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
US. Massachusetts RTK - Substance List
Mirex (CAS 2385-85-5)

US. New Jersey Worker and Community Right-to-Know Act
Mirex (CAS 2385-85-5) 500 LBS

US. Pennsylvania RTK - Hazardous Substances
Mirex (CAS 2385-85-5)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
Mirex (CAS 2385-85-5) Listed: January 1, 1988

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*"A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 12-19-2014
Version # 01
NFPA ratings
Health: 2
Flammability: 0
Instability: 0
Disclaimer

The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded SDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

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