



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

**Product name:** DOWSIL™ 7657 Adhesive

**Issue Date:** 02/13/2020

**Print Date:** 02/14/2020

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## 1. IDENTIFICATION

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**Product name:** DOWSIL™ 7657 Adhesive

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Adhesive, binding agents

### COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY  
2211 H.H. DOW WAY  
MIDLAND MI 48674  
UNITED STATES

**Customer Information Number:**

800-258-2436  
SDSQuestion@dow.com

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** CHEMTREC +1 800-424-9300

**Local Emergency Contact:** 800-424-9300

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## 2. HAZARDS IDENTIFICATION

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### Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids - Category 3

Skin irritation - Category 2

Eye irritation - Category 2A

Reproductive toxicity - Category 2

Specific target organ toxicity - single exposure - Category 3

Specific target organ toxicity - repeated exposure - Category 2 - Inhalation

### Label elements

#### Hazard pictograms



Signal word: **WARNING!**

**Hazards**

Flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

Suspected of damaging fertility or the unborn child.

May cause damage to organs (Auditory system) through prolonged or repeated exposure if inhaled.

**Precautionary statements****Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

Keep container tightly closed.

Keep only in original container.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ ventilating/ lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor 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 exposed or concerned: Get medical advice/ attention.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

In case of fire: Use alcohol-resistant foam, carbon dioxide or water mist to extinguish.

**Storage**

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

**Disposal**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

May generate flammable hydrogen gas. Avoid contact with water, alcohols, acidic, basic, or oxidizing materials.

Static-accumulating flammable liquid.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**Chemical nature:** Silicone in solvent

This product is a mixture.

| Component                     | CASRN     | Concentration       |
|-------------------------------|-----------|---------------------|
| Xylene                        | 1330-20-7 | >= 28.0 - <= 38.0 % |
| Ethylbenzene                  | 100-41-4  | >= 8.0 - <= 11.0 %  |
| Toluene                       | 108-88-3  | >= 0.16 - <= 0.23 % |
| Octamethyl Cyclotetrasiloxane | 556-67-2  | <= 0.12 %           |

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### 4. FIRST AID MEASURES

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#### Description of first aid measures

##### General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

**Ingestion:** Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

##### Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

##### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce

vomiting or not should be made by a physician. If burn is present, treat as any thermal burn, after decontamination. Alcohol consumed before or after exposure may increase adverse effects. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

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## 5. FIREFIGHTING MEASURES

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### Extinguishing media

**Suitable extinguishing media:** Water spray. Alcohol-resistant foam. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media:** Dry chemical. High volume water jet. Do not use direct water stream..

### Special hazards arising from the substance or mixture

**Hazardous combustion products:** Carbon oxides. Silicon oxides.

**Unusual Fire and Explosion Hazards:** Flash back possible over considerable distance.. Applying foam will release significant amounts of hydrogen gas that can be trapped under the foam blanket.. Exposure to combustion products may be a hazard to health.. Vapours may form explosive mixtures with air..

### Advice for firefighters

**Fire Fighting Procedures:** Use water spray to cool unopened containers.. Evacuate area.. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.. Do not use a solid water stream as it may scatter and spread fire.. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not allow extinguishing medium to contact container contents. Most fire extinguishing media will cause hydrogen evolution, and once the fire is put out, may accumulate in poorly ventilated or confined areas and result in flash fire or explosion if ignited. Remove undamaged containers from fire area if it is safe to do so.

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus.. Use personal protective equipment..

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Remove all sources of ignition. Use personal protective equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:** Do not release the product to the aquatic environment above defined regulatory levels. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide

area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up:** Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Materials in contact with water, moisture, acids or bases have the potential to generate hydrogen gas. Recovered material should be stored in a vented container. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container. See sections: 7, 8, 11, 12 and 13.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** Do not get on skin or clothing. Do not breathe vapours or spray mist. Do not swallow. Do not get in eyes. Keep container tightly closed. Keep away from water. Protect from moisture. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Non-sparking tools should be used. Handle in accordance with good industrial hygiene and safety practice. Use with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

**Conditions for safe storage:** Keep in properly labelled containers. Store in original container. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition. Product may evolve minute quantities of flammable hydrogen gas which can accumulate. Adequately ventilate to maintain vapors well below flammability limits and exposure guidelines. Do not repack. Clogged container vents may increase pressure build up. Store in a closed container.

Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Flammable solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases. Unsuitable materials for containers: Do not store in or use containers except the original product package.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

| Component | Regulation | Type of listing | Value |
|-----------|------------|-----------------|-------|
|-----------|------------|-----------------|-------|

|                               |                                                                                                                                                                                                                                                                                                                        |      |                         |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------|
| Xylene                        | OSHA Z-1                                                                                                                                                                                                                                                                                                               | TWA  | 435 mg/m3 100 ppm       |
|                               | Further information: (b): The value in mg/m3 is approximate.                                                                                                                                                                                                                                                           |      |                         |
|                               | ACGIH                                                                                                                                                                                                                                                                                                                  | TWA  | 100 ppm                 |
|                               | Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A4: Not classifiable as a human carcinogen                                     |      |                         |
|                               | ACGIH                                                                                                                                                                                                                                                                                                                  | STEL | 150 ppm                 |
|                               | Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A4: Not classifiable as a human carcinogen                                     |      |                         |
| Ethylbenzene                  | ACGIH                                                                                                                                                                                                                                                                                                                  | TWA  | 20 ppm                  |
|                               | Further information: cochlear imp: Cochlear impair; kidney dam (nephropathy): Kidney damage (nephropathy); URT irr: Upper Respiratory Tract irritation; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A3: Confirmed animal carcinogen with unknown relevance to humans |      |                         |
|                               | OSHA Z-1                                                                                                                                                                                                                                                                                                               | TWA  | 435 mg/m3 100 ppm       |
|                               | Further information: (b): The value in mg/m3 is approximate.                                                                                                                                                                                                                                                           |      |                         |
|                               | OSHA P0                                                                                                                                                                                                                                                                                                                | TWA  | 435 mg/m3 100 ppm       |
|                               | OSHA P0                                                                                                                                                                                                                                                                                                                | STEL | 545 mg/m3 125 ppm       |
| Toluene                       | ACGIH                                                                                                                                                                                                                                                                                                                  | TWA  | 20 ppm                  |
|                               | Further information: visual impair: Visual impairment; female repro: Female reproductive; pregnancy loss: Pregnancy loss; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A4: Not classifiable as a human carcinogen                                                     |      |                         |
|                               | OSHA Z-1                                                                                                                                                                                                                                                                                                               |      | See Further information |
|                               | Further information: (2): See Table Z-2                                                                                                                                                                                                                                                                                |      |                         |
|                               | OSHA Z-2                                                                                                                                                                                                                                                                                                               | TWA  | 200 ppm                 |
|                               | Further information: Z37.12-1967                                                                                                                                                                                                                                                                                       |      |                         |
|                               | OSHA Z-2                                                                                                                                                                                                                                                                                                               | CEIL | 300 ppm                 |
|                               | Further information: Z37.12-1967                                                                                                                                                                                                                                                                                       |      |                         |
|                               | OSHA Z-2                                                                                                                                                                                                                                                                                                               | Peak | 500 ppm                 |
|                               | Further information: Z37.12-1967                                                                                                                                                                                                                                                                                       |      |                         |
| Octamethyl Cyclotetrasiloxane | US WEEL                                                                                                                                                                                                                                                                                                                | TWA  | 10 ppm                  |

**Biological occupational exposure limits**

| Components   | CAS-No.   | Control parameters                             | Biological specimen | Sampling time                                            | Permissible concentration | Basis        |
|--------------|-----------|------------------------------------------------|---------------------|----------------------------------------------------------|---------------------------|--------------|
| Xylene       | 1330-20-7 | Methylhippuric acids                           | Urine               | End of shift (As soon as possible after exposure ceases) | 1.5 g/g creatinine        | ACGIH<br>BEI |
| Ethylbenzene | 100-41-4  | Sum of mandelic acid and phenyl glyoxylic acid | Urine               | End of shift (As soon as possible after exposure ceases) | 0.15 g/g creatinine       | ACGIH<br>BEI |
| Toluene      | 108-88-3  | Toluene                                        | In blood            | Prior to last shift                                      | 0.02 mg/l                 | ACGIH<br>BEI |

|          |       |                                                                                              |                        |              |
|----------|-------|----------------------------------------------------------------------------------------------|------------------------|--------------|
| Toluene  | Urine | of<br>workweek<br>End of<br>shift (As<br>soon as<br>possible<br>after<br>exposure<br>ceases) | 0.03 mg/l              | ACGIH<br>BEI |
| o-Cresol | Urine | End of<br>shift (As<br>soon as<br>possible<br>after<br>exposure<br>ceases)                   | 0.3 mg/g<br>Creatinine | ACGIH<br>BEI |

**Exposure controls**

**Engineering controls:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

**Individual protection measures**

**Eyel/face protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

**Skin protection**

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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|                                        |                                                          |
|----------------------------------------|----------------------------------------------------------|
| <b>Appearance</b>                      |                                                          |
| Physical state                         | liquid                                                   |
| Color                                  | colourless                                               |
| Odor                                   | solvent-like                                             |
| Odor Threshold                         | No data available                                        |
| pH                                     | No data available                                        |
| Melting point/range                    | No data available                                        |
| Freezing point                         | No data available                                        |
| Boiling point (760 mmHg)               | > 100 °C (> 212 °F)                                      |
| Flash point                            | <b>Pensky-Martens closed cup</b> 23 °C (73 °F)           |
| Evaporation Rate (Butyl Acetate = 1)   | No data available                                        |
| Flammability (solid, gas)              | Not applicable                                           |
| Lower explosion limit                  | No data available                                        |
| Upper explosion limit                  | No data available                                        |
| Vapor Pressure                         | No data available                                        |
| Relative Vapor Density (air = 1)       | No data available                                        |
| Relative Density (water = 1)           | 1                                                        |
| Water solubility                       | No data available                                        |
| Partition coefficient: n-octanol/water | No data available                                        |
| Auto-ignition temperature              | No data available                                        |
| Decomposition temperature              | No data available                                        |
| Kinematic Viscosity                    | 40000 cSt at 25 °C (77 °F)                               |
| Explosive properties                   | Not explosive                                            |
| Oxidizing properties                   | The substance or mixture is not classified as oxidizing. |
| Molecular weight                       | No data available                                        |
| Particle size                          | Not applicable                                           |

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** Not classified as a reactivity hazard.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents. Vapours may form explosive mixture with air. Product may evolve flammable hydrogen gas on contact with water, alcohols, acidic or basic materials, many metals or metallic compounds and can form explosive mixtures in air. Hazardous decomposition products will be formed at elevated temperatures. Flammable liquid and vapour.

**Conditions to avoid:** Heat, flames and sparks. Exposure to moisture

**Incompatible materials:** Oxidizing agents

**Hazardous decomposition products:**

Decomposition products can include and are not limited to: Formaldehyde.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

**Information on likely routes of exposure**

Inhalation, Eye contact, Skin contact, Ingestion.

**Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)**

**Acute oral toxicity**

Very low toxicity if swallowed. Swallowing may result in gastrointestinal irritation or ulceration.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):

LD50, > 5,000 mg/kg Estimated.

**Information for components:**

**Xylene**

LD50, Rat, 4,300 mg/kg

**Ethylbenzene**

LD50, Rat, 3,500 mg/kg

**Toluene**

LD50, Rat, 5,580 mg/kg

**Octamethyl Cyclotetrasiloxane**

LD50, Rat, male, > 4,800 mg/kg No deaths occurred at this concentration.

**Acute dermal toxicity**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):

LD50, > 2,000 mg/kg Estimated.

**Information for components:**

**Xylene**

LD50, Rabbit, > 2,000 mg/kg

**Ethylbenzene**

LD50, Rabbit, 15,500 mg/kg

**Toluene**

LD50, Rabbit, 12,267 mg/kg

**Octamethyl Cyclotetrasiloxane**

LD50, Rat, male and female, > 2,400 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity**

Vapor concentrations are attainable which could be hazardous on single exposure. May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. In humans, symptoms may include: Lethargy. Alcohol consumed before or after exposure may increase adverse effects.

As product: The LC50 has not been determined.

**Information for components:**

**Xylene**

LC50, Rat, 4 Hour, vapour, 27.5 mg/l

**Ethylbenzene**

LC50, Rat, 4 Hour, vapour, 17.2 mg/l

**Toluene**

LC50, Rat, male, 4 Hour, vapour, 25.7 mg/l

LC50, Rat, female, 4 Hour, vapour, 30 mg/l

**Octamethyl Cyclotetrasiloxane**

LC50, Rat, male and female, 4 Hour, dust/mist, 36 mg/l OECD Test Guideline 403

**Skin corrosion/irritation**

Based on information for component(s):

Brief contact may cause moderate skin irritation with local redness.

Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

May cause drying and flaking of the skin.

Vapor may cause skin irritation.

**Information for components:**

**Xylene**

Prolonged contact may cause skin irritation with local redness.

Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

Vapor may cause skin irritation.

May cause drying and flaking of the skin.

**Ethylbenzene**

Brief contact may cause moderate skin irritation with local redness.

Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

May cause drying and flaking of the skin.

**Toluene**

Brief contact may cause slight skin irritation with local redness.

Prolonged contact may cause moderate skin irritation with local redness.

May cause drying and flaking of the skin.

**Octamethyl Cyclotetrasiloxane**

Brief contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**

Based on information for component(s):

May cause moderate eye irritation.

May cause slight temporary corneal injury.

Vapor may cause eye irritation experienced as mild discomfort and redness.

Vapor may cause lacrimation (tears).

**Information for components:****Xylene**

May cause moderate eye irritation.

May cause slight temporary corneal injury.

Vapor may cause eye irritation experienced as mild discomfort and redness.

**Ethylbenzene**

May cause moderate eye irritation.

Vapor may cause lacrimation (tears).

**Toluene**

May cause slight eye irritation.

May cause slight temporary corneal injury.

Vapor may cause eye irritation experienced as mild discomfort and redness.

Vapor may cause lacrimation (tears).

**Octamethyl Cyclotetrasiloxane**

Essentially nonirritating to eyes.

**Sensitization**

For skin sensitization:

Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

For respiratory sensitization:

No specific, relevant data available for assessment.

**Information for components:****Xylene**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Ethylbenzene**

Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:  
No relevant data found.

**Toluene**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Octamethyl Cyclotetrasiloxane**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

**Information for components:**

**Xylene**

May cause respiratory irritation.  
Route of Exposure: Inhalation  
Target Organs: Respiratory system

**Ethylbenzene**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Toluene**

May cause drowsiness or dizziness.  
Route of Exposure: Inhalation  
Target Organs: Central nervous system

**Octamethyl Cyclotetrasiloxane**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

**Information for components:**

**Xylene**

May be fatal if swallowed and enters airways.

**Ethylbenzene**

Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. May be fatal if swallowed and enters airways.

**Toluene**

May be fatal if swallowed and enters airways.

**Octamethyl Cyclotetrasiloxane**

May be harmful if swallowed and enters airways.

**Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)**

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Contains component(s) which have been reported to cause effects on the following organs in animals:

Kidney

Liver

Blood

lung

May cause hearing loss based on animal data.

Although one early inhalation study on ethylbenzene reported an adverse effect on the testes, recent, more comprehensive studies have not shown this effect.

**Information for components:**

**Xylene**

In animals, effects have been reported on the following organs:

Liver

kidney

Blood

Xylene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations; such effects have not been reported in humans.

**Ethylbenzene**

In animals, effects have been reported on the following organs:

May cause hearing loss based on animal data.

Kidney.

Liver.

Lung.

Although one early inhalation study on ethylbenzene reported an adverse effect on the testes, recent, more comprehensive studies have not shown this effect.

**Toluene**

In animals, effects have been reported on the following organs:

central nervous system (CNS) effects

Excessive exposure may cause neurologic signs and symptoms.

Toluene has caused hearing loss in laboratory animals upon exposure to high concentrations.

Intentional misuse by deliberately inhaling toluene may cause nervous system damage, hearing loss, liver and kidney effects and death.

**Octamethyl Cyclotetrasiloxane**

In animals, effects have been reported on the following organs:

Kidney.

Liver.

Respiratory tract.

Female reproductive organs.

**Carcinogenicity**

Based on information for component(s): Ethylbenzene has been shown to cause cancer in laboratory animals. There is no evidence that these findings are relevant to humans.

**Information for components:****Xylene**

Xylene was not found to be carcinogenic in a National Toxicology Program bioassay in rats and mice.

**Ethylbenzene**

Ethylbenzene has been shown to cause cancer in laboratory animals. There is no evidence that these findings are relevant to humans.

**Toluene**

Did not cause cancer in laboratory animals.

**Octamethyl Cyclotetrasiloxane**

Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

**Carcinogenicity****Component****Ethylbenzene****List**

IARC

ACGIH

**Classification**

Group 2B: Possibly carcinogenic to humans

A3: Confirmed animal carcinogen with unknown relevance to humans.

**Teratogenicity**

In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

**Information for components:****Xylene**

Exaggerated doses of xylene given orally to pregnant mice resulted in an increase in cleft palate, a common developmental abnormality in mice. In animal inhalation studies, xylene caused toxicity to the fetus but did not cause birth defects. Available data are inadequate for evaluation of maternal toxicity.

**Ethylbenzene**

Has caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in lab animals at doses nontoxic to the mother.

**Toluene**

In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

**Octamethyl Cyclotetrasiloxane**

Did not cause birth defects or any other fetal effects in laboratory animals.

**Reproductive toxicity**

Contains component(s) which have interfered with fertility in animal studies. Contains component(s) which have been shown to interfere with reproduction in animal studies.

**Information for components:****Xylene**

In animal studies, did not interfere with reproduction.

**Ethylbenzene**

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

**Toluene**

In animal studies, did not interfere with reproduction.

**Octamethyl Cyclotetrasiloxane**

In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. In animal studies, has been shown to interfere with fertility.

**Mutagenicity**

In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity studies in animals were negative for component(s) tested.

**Information for components:****Xylene**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Ethylbenzene**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Toluene**

The majority and most reliable of the many genetic toxicity studies on toluene, both in vitro and in animals, indicate that it is not genetically toxic.

**Octamethyl Cyclotetrasiloxane**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

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**12. ECOLOGICAL INFORMATION**

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*Ecotoxicological information appears in this section when such data is available.*

**Toxicity****Xylene****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 Hour, 2.6 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

IC50, *Daphnia magna* (Water flea), 24 Hour, 1 - 4.7 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, *Pseudokirchneriella subcapitata* (algae), Static, 73 Hour, Growth rate, 4.36 mg/l, OECD Test Guideline 201 or Equivalent

NOEC, *Pseudokirchneriella subcapitata* (green algae), 73 Hour, Growth rate, 0.44 mg/l, OECD Test Guideline 201 or Equivalent

**Chronic toxicity to fish**

NOEC, *Oncorhynchus mykiss* (rainbow trout), flow-through, 56 d, mortality, > 1.3 mg/l

**Ethylbenzene****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 Hour, 4.2 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), Static, 48 Hour, 1.8 - 2.4 mg/l

**Acute toxicity to algae/aquatic plants**

EC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Growth inhibition (cell density reduction), 3.6 - 4.6 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, Bacteria, 16 Hour, > 12 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, *Ceriodaphnia dubia* (water flea), semi-static test, 7 d, 0.96 mg/l

**Toxicity to soil-dwelling organisms**

LC50, *Eisenia fetida* (earthworms), 2 d, survival, 0.047 mg/cm<sup>2</sup>

**Toluene****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 Hour, 5.8 mg/l

**Acute toxicity to aquatic invertebrates**

LC50, water flea *Ceriodaphnia dubia*, semi-static test, 48 Hour, 3.78 mg/l

**Acute toxicity to algae/aquatic plants**

EbC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Biomass, 12.5 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

IC50, Bacteria, 16 Hour, 29 mg/l

**Chronic toxicity to fish**

NOEC, Fish, flow-through test, 40 d, growth, 1.4 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Ceriodaphnia dubia (water flea), 7 d, number of offspring, 0.74 mg/l

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), 150 - 280 mg/kg

**Octamethyl Cyclotetrasiloxane****Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

No toxicity at the limit of solubility

LC50, Oncorhynchus mykiss (rainbow trout), flow-through, 96 Hour, > 0.022 mg/l

No toxicity at the limit of solubility

LC50, Cyprinodon variegatus (sheepshead minnow), flow-through, 14 d, > 0.0063 mg/l

**Acute toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

EC50, Mysis bahia (opossum shrimp), flow-through test, 96 Hour, > 0.0091 mg/l

No toxicity at the limit of solubility

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 0.015 mg/l

**Acute toxicity to algae/aquatic plants**

No toxicity at the limit of solubility

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, > 0.022 mg/l

**Chronic toxicity to fish**

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), 93 d, >= 0.0044 mg/l

**Chronic toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

NOEC, Daphnia magna (Water flea), 21 d, >= 0.0079 mg/l

**Persistence and degradability****Xylene**

**Biodegradability:** Material is expected to be readily biodegradable.

10-day Window: Pass

**Biodegradation:** > 60 %

**Exposure time:** 10 d

**Method:** OECD Test Guideline 301F or Equivalent

**Theoretical Oxygen Demand:** 3.17 mg/mg

**Biological oxygen demand (BOD)**

| Incubation Time | BOD      |
|-----------------|----------|
| 5 d             | 37.000 % |
| 10 d            | 58.000 % |
| 20 d            | 72.000 % |

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)  
**Sensitization:** OH radicals  
**Atmospheric half-life:** 19.7 Hour  
**Method:** Estimated.

### Ethylbenzene

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.  
**10-day Window:** Pass  
**Biodegradation:** 100 %  
**Exposure time:** 6 d  
**Method:** OECD Test Guideline 301E or Equivalent

**Theoretical Oxygen Demand:** 3.17 mg/mg Estimated.

**Chemical Oxygen Demand:** 2.62 mg/mg Dichromate

### **Biological oxygen demand (BOD)**

| Incubation Time | BOD    |
|-----------------|--------|
| 5 d             | 31.5 % |
| 10 d            | 38.5 % |
| 20 d            | 45.4 % |

**Photodegradation**  
**Sensitization:** OH radicals  
**Atmospheric half-life:** 55 Hour  
**Method:** Estimated.

### Toluene

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.  
**10-day Window:** Not applicable  
**Biodegradation:** 100 %  
**Exposure time:** 14 d  
**Method:** OECD Test Guideline 301C or Equivalent

**Theoretical Oxygen Demand:** 3.13 mg/mg Calculated.

**Photodegradation**  
**Test Type:** Half-life (indirect photolysis)  
**Sensitization:** OH radicals  
**Atmospheric half-life:** 2 d  
**Method:** Estimated.

### Octamethyl Cyclotetrasiloxane

**Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.  
**10-day Window:** Not applicable  
**Biodegradation:** 3.7 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 310

**Stability in Water (1/2-life)**

Hydrolysis, DT50, 69.3 - 144 Hour, pH 7, Half-life Temperature 24.6 °C, OECD Test Guideline 111

**Photodegradation**

**Atmospheric half-life:** 16 d

**Method:** Estimated.

**Bioaccumulative potential****Xylene**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 3.12 Measured

**Bioconcentration factor (BCF):** 25.9 Rainbow trout (Salmo gairdneri) Measured

**Ethylbenzene**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 3.15 Measured

**Bioconcentration factor (BCF):** 15 Fish Measured

**Toluene**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 2.73 Measured

**Bioconcentration factor (BCF):** 13.2 - 90 Fish Measured

**Octamethyl Cyclotetrasiloxane**

**Bioaccumulation:** Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

**Partition coefficient: n-octanol/water(log Pow):** 6.49 Measured

**Bioconcentration factor (BCF):** 12,400 Pimephales promelas (fathead minnow) Measured

**Mobility in soil****Xylene**

Potential for mobility in soil is medium (Koc between 150 and 500).

**Partition coefficient (Koc):** 443 Estimated.

**Ethylbenzene**

Potential for mobility in soil is low (Koc between 500 and 2000).

**Partition coefficient (Koc):** 518 Estimated.

**Toluene**

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 37 - 178 Estimated.

**Octamethyl Cyclotetrasiloxane**

Expected to be relatively immobile in soil (Koc > 5000).

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### 13. DISPOSAL CONSIDERATIONS

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**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

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### 14. TRANSPORT INFORMATION

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**DOT**

|                      |                      |
|----------------------|----------------------|
| Proper shipping name | Adhesives            |
| UN number            | UN 1133              |
| Class                | 3                    |
| Packing group        | III                  |
| Reportable Quantity  | Xylene, Ethylbenzene |

**Classification for SEA transport (IMO-IMDG):**

|                                                                                      |                                                        |
|--------------------------------------------------------------------------------------|--------------------------------------------------------|
| Proper shipping name                                                                 | ADHESIVES                                              |
| UN number                                                                            | UN 1133                                                |
| Class                                                                                | 3                                                      |
| Packing group                                                                        | III                                                    |
| Marine pollutant                                                                     | No                                                     |
| Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code | Consult IMO regulations before transporting ocean bulk |

**Classification for AIR transport (IATA/ICAO):**

|                      |           |
|----------------------|-----------|
| Proper shipping name | Adhesives |
| UN number            | UN 1133   |
| Class                | 3         |
| Packing group        | III       |

**Further information:**

VENTED PACKAGES ARE FORBIDDEN FOR AIR TRANSPORT.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## 15. REGULATORY INFORMATION

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### **Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

Flammable (gases, aerosols, liquids, or solids)  
Hazard not otherwise classified (physical hazards)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)

### **Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

The following components are subject to reporting levels established by SARA Title III, Section 313:

| <b>Components</b> | <b>CASRN</b> |
|-------------------|--------------|
| Xylene            | 1330-20-7    |
| Ethylbenzene      | 100-41-4     |

### **Pennsylvania Right To Know**

The following chemicals are listed because of the additional requirements of Pennsylvania law:

| <b>Components</b>                                  | <b>CASRN</b> |
|----------------------------------------------------|--------------|
| Trimethylated silica                               | 68988-56-7   |
| Xylene                                             | 1330-20-7    |
| Dimethyl Siloxane, Dimethylvinylsiloxyl-terminated | 68083-19-2   |
| Ethylbenzene                                       | 100-41-4     |
| Benzene                                            | 71-43-2      |

### **California Prop. 65**

WARNING: This product can expose you to chemicals including Ethylbenzene, Benzene, which is/are known to the State of California to cause cancer, and Toluene, Benzene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### **United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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## 16. OTHER INFORMATION

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**Hazard Rating System****NFPA**

| Health | Flammability | Instability |
|--------|--------------|-------------|
| 2      | 3            | 0           |

**HMIS**

| Health | Flammability | Physical Hazard |
|--------|--------------|-----------------|
| 2*     | 3            | 1               |

\* = Chronic Effects (See Hazards Identification)

**Revision**

Identification Number: 99128446 / A001 / Issue Date: 02/13/2020 / Version: 12.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

|           |                                                                                      |
|-----------|--------------------------------------------------------------------------------------|
| ACGIH     | USA. ACGIH Threshold Limit Values (TLV)                                              |
| ACGIH BEI | ACGIH - Biological Exposure Indices (BEI)                                            |
| CEIL      | Acceptable ceiling concentration                                                     |
| OSHA P0   | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                        |
| OSHA Z-1  | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants     |
| OSHA Z-2  | USA. Occupational Exposure Limits (OSHA) - Table Z-2                                 |
| Peak      | Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift |
| STEL      | Short-term exposure limit                                                            |
| TWA       | 8-hour, time-weighted average                                                        |
| US WEEL   | USA. Workplace Environmental Exposure Levels (WEEL)                                  |

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of

Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

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