



# Material Safety Data Sheet

DOW CHEMICAL INTERNATIONAL PVT. LTD.

**Product name:** DOWSIL™ 995 Silicone Structural Sealant Black

**Issue Date:** 28.04.2021

**Print Date:** 29.04.2021

DOW CHEMICAL INTERNATIONAL PVT. LTD. 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. PRODUCT AND COMPANY IDENTIFICATION

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**Product name:** DOWSIL™ 995 Silicone Structural Sealant Black

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

**Identified uses:** Adhesive, binding agents

### COMPANY IDENTIFICATION

DOW CHEMICAL INTERNATIONAL PVT. LTD.  
GODREJ IT PARK - P2, 1st FLOOR, BLOCK B, 02  
LBS ROAD, GODREJ BUSINESS DISTRICT  
PIROJSHANAGAR  
400079 VIKHROLI, MUMBAI  
INDIA

**Customer Information Number:**

(91) 22-6674-1500  
SDSQuestion@dow.com

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 91-22-6674-1800

**Local Emergency Contact:** 0091-22-6674-1800

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## 2. HAZARDS IDENTIFICATION

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### GHS Classification

This product is not hazardous per the Globally Harmonized System of Classification and Labelling (GHS).

### GHS label elements

### Precautionary statements

#### Prevention

Use only outdoors or in a well-ventilated area.

### Other hazards

No data available

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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This product is a mixture.

| Component                        | CASRN     | Concentration       |
|----------------------------------|-----------|---------------------|
| Methyltrimethoxysilane           | 1185-55-3 | >= 0.18 - <= 0.4 %  |
| 3-Mercaptopropyltrimethoxysilane | 4420-74-0 | >= 0.08 - <= 0.17 % |

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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; consult a physician.

**Skin contact:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation or rash occurs. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

**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.

**Ingestion:** Rinse mouth with water. No emergency medical treatment necessary.

##### 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:** 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>). Dry chemical.

**Unsuitable extinguishing media:** None known..

### Special hazards arising from the substance or mixture

**Hazardous combustion products:** Silicon oxides. Formaldehyde. Carbon oxides. Metal oxides. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke)..

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard to health..

### Advice for firefighters

**Fire Fighting Procedures:** Use water spray to cool unopened containers.. Evacuate area.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations..

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Remove undamaged containers from fire area if it is safe to do so.

**Special protective equipment for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.. Use personal protective equipment..

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:** Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. 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:** Wipe up or scrape up and contain for salvage or disposal. 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.

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. Avoid contact with eyes. Do not swallow. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.

Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

**Conditions for safe storage:** Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.

Unsuitable materials for containers: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 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   |
|--|------------|-----------------|---------|
| Methyltrimethoxysilane                       | Dow IHG    | TWA             | 7.5 ppm |
| Further information: Skin Sensitizer         |            |                 |         |
| 3-Mercaptopropyltrimethoxysilane             | Dow IHG    | TWA             | 0.1 ppm |
| Further information: SKIN: Absorbed via skin |            |                 |         |

The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing: Methanol.

### Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use safety glasses (with side shields).

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). 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. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

|  |  |
|--|--|
| Physical state                         | paste  |
| Color                                  | black  |
| Odor                                   | alcohol-like   |
| Odor Threshold                         | No data available  |
| pH                                     | Not applicable   |
| Melting point/range                    | No data available  |
| Freezing point                         | No data available  |
| Boiling point (760 mmHg)               | Not applicable   |
| Flash point                            | Not applicable   |
| Evaporation Rate (Butyl Acetate = 1)   | Not applicable   |
| Flammability (solid, gas)              | Not classified as a flammability hazard                  |
| Lower explosion limit                  | No data available  |
| Upper explosion limit                  | No data available  |
| Vapor Pressure                         | Not applicable   |
| Relative Vapor Density (air = 1)       | No data available  |
| Relative Density (water = 1)           | 1.33   |
| Water solubility                       | No data available  |
| Partition coefficient: n-octanol/water | No data available  |
| Auto-ignition temperature              | No data available  |
| Decomposition temperature              | No data available  |
| Dynamic Viscosity                      | Not applicable   |
| Kinematic Viscosity                    | Not applicable   |
| Explosive properties                   | Not explosive  |
| Oxidizing properties                   | The substance or mixture is not classified as oxidizing. |
| Molecular weight                       | No data available  |
| Particle size                          | No data available  |

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.

**Conditions to avoid:** None known.

**Incompatible materials:** Avoid contact with oxidizing materials.

**Hazardous decomposition products:**

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

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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

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. Harmful effects not anticipated from swallowing small amounts.

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

Based on information for component(s):

LD50, Rat, > 5,000 mg/kg Estimated.

#### Information for components:

##### Methyltrimethoxysilane

LD50, Rat, male and female, 11,685 mg/kg

This substance may hydrolyze to release Methanol. Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

##### 3-Mercaptopropyltrimethoxysilane

Swallowing may result in irritation of the mouth, throat, and gastrointestinal tract. Contains a component(s) which hydrolyzes to methanol. Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

LD50, Rat, male, 914 mg/kg

LD50, Rat, female, 758 mg/kg

This substance may hydrolyze to release Methanol. Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

#### 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:****Methyltrimethoxysilane**

LD50, Rabbit, male and female, > 9,500 mg/kg OECD 402 or equivalent

This substance may hydrolyze to release Methanol. Effects of methanol are the same as observed via oral and inhalation exposure and include central nervous system (CNS) depression, visual impairment up to blindness, metabolic acidosis, with effects on organ systems such as liver, kidneys and heart, even death.

**3-Mercaptopropyltrimethoxysilane**

LD50, Rat, 2,348 mg/kg

This substance may hydrolyze to release Methanol. Effects of methanol are the same as observed via oral and inhalation exposure and include central nervous system (CNS) depression, visual impairment up to blindness, metabolic acidosis, with effects on organ systems such as liver, kidneys and heart, even death.

**Acute inhalation toxicity**

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.

As product: The LC50 has not been determined.

**Information for components:****Methyltrimethoxysilane**

LC50, Rat, male and female, 6 Hour, vapour, > 7605 ppm OECD Test Guideline 403

This substance may hydrolyze to release Methanol. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death.

**3-Mercaptopropyltrimethoxysilane**

Contains a component(s) which hydrolyzes to methanol. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death.

The LC50 has not been determined.

This substance may hydrolyze to release Methanol. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death.

**Skin corrosion/irritation**

Based on information for component(s):

Brief contact is essentially nonirritating to skin.

May cause drying and flaking of the skin.

**Information for components:****Methyltrimethoxysilane**

Brief contact may cause slight skin irritation with local redness.

**3-Mercaptopropyltrimethoxysilane**

Brief contact is essentially nonirritating to skin.  
Repeated exposure may cause irritation, even a burn.

**Serious eye damage/eye irritation**

Based on information for component(s):  
May cause slight temporary eye irritation.  
May cause mild eye discomfort.

**Information for components:**

**Methyltrimethoxysilane**

May cause slight temporary eye irritation.  
Corneal injury is unlikely.

**3-Mercaptopropyltrimethoxysilane**

May cause slight temporary eye irritation.  
Corneal injury is unlikely.

**Sensitization**

For skin sensitization:  
Contains component(s) which have caused allergic skin sensitization in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Information for components:**

**Methyltrimethoxysilane**

For skin sensitization:  
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**3-Mercaptopropyltrimethoxysilane**

Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

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

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

**Information for components:**

**Methyltrimethoxysilane**

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

**3-Mercaptopropyltrimethoxysilane**

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:**

**Methyltrimethoxysilane**

May be harmful if swallowed and enters airways.

**3-Mercaptopropyltrimethoxysilane**

Based on available information, aspiration hazard could not be determined.

**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)**

No relevant data found.

**Information for components:**

**Methyltrimethoxysilane**

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**3-Mercaptopropyltrimethoxysilane**

No relevant data found.

**Carcinogenicity**

Contains a component(s) that is/are not expected to be bioavailable due to the physical state of the material under normal handling and processing conditions.

**Information for components:**

**Methyltrimethoxysilane**

No relevant data found.

**3-Mercaptopropyltrimethoxysilane**

No relevant data found.

**Teratogenicity**

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

**Information for components:**

**Methyltrimethoxysilane**

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

**3-Mercaptopropyltrimethoxysilane**

No relevant data found.

**Reproductive toxicity**

Contains component(s) which did not interfere with reproduction in animal studies. Contains component(s) which did not interfere with fertility in animal studies.

**Information for components:**

**Methyltrimethoxysilane**

In animal studies, did not interfere with reproduction.

**3-Mercaptopropyltrimethoxysilane**

No relevant data found.

**Mutagenicity**

In vitro genetic toxicity studies were negative for component(s) tested. Contains component(s) which were negative in some animal genetic toxicity studies and positive in others. Positive findings were observed only at doses which produced significant inflammation.

**Information for components:**

**Methyltrimethoxysilane**

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

**3-Mercaptopropyltrimethoxysilane**

In vitro genetic toxicity studies were predominantly negative.

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## 12. ECOLOGICAL INFORMATION

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

**Ecotoxicity**

**Methyltrimethoxysilane**

**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, *Oncorhynchus mykiss* (rainbow trout), 96 Hour, > 110 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), flow-through test, 48 Hour, > 122 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Growth rate inhibition, > 3.6 mg/l, OECD Test Guideline 201  
NOEC, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Growth rate inhibition, >= 3.6 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

EC10, activated sludge, 3 Hour, Respiration rates., > 100 mg/l, OECD Test Guideline 209

**Chronic toxicity to aquatic invertebrates**

NOEC, *Daphnia magna* (Water flea), 28 d, number of offspring, >= 10 mg/l

**3-Mercaptopropyltrimethoxysilane**

**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, Pimephales promelas (fathead minnow), 96 Hour, 253 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, 4.0 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, Scenedesmus subspicatus, 72 Hour, 931 mg/l

**Toxicity to bacteria**

IC50, Bacteria, 16 Hour, 850 mg/l

**Persistence and degradability**

**Methyltrimethoxysilane**

**Biodegradability:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

**Biodegradation:** 54 %

**Exposure time:** 28 d

**Method:** Regulation (EC) No. 440/2008, Annex, C.4-A

**3-Mercaptopropyltrimethoxysilane**

**Biodegradability:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

**Theoretical Oxygen Demand:** 1.71 mg/mg Estimated.

**Chemical Oxygen Demand:** 1.73 mg/mg Estimated.

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitization:** OH radicals

**Atmospheric half-life:** 0.229 d

**Method:** Estimated.

**Bioaccumulative potential**

**Methyltrimethoxysilane**

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

**Partition coefficient: n-octanol/water(log Pow):** -0.82 Estimated.

**3-Mercaptopropyltrimethoxysilane**

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

**Partition coefficient: n-octanol/water(log Pow):** 0.25 Estimated.

**Mobility in Soil**

**Methyltrimethoxysilane**

No relevant data found.

**3-Mercaptopropyltrimethoxysilane**

Partition coefficient (Koc): 2577 Estimated.

#### Results of PBT and vPvB assessment

##### Methyltrimethoxysilane

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

##### 3-Mercaptopropyltrimethoxysilane

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

#### Other adverse effects

##### Methyltrimethoxysilane

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

##### 3-Mercaptopropyltrimethoxysilane

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

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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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#### Classification for ROAD and Rail transport:

Not regulated for transport

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

Not regulated for transport

Transport in bulk  
according to Annex I or II  
of MARPOL 73/78 and the

Consult IMO regulations before transporting ocean bulk

**IBC or IGC Code****Classification for AIR transport (IATA/ICAO):**

Not regulated for 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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This product has been classified in accordance with the criteria of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), rev. 8.

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**16. OTHER INFORMATION**

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**Revision**

Identification Number: 4015908 / A146 / Issue Date: 28.04.2021 / Version: 4.0

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

**Legend**

|         |                                  |
|---------|----------------------------------|
| Dow IHG | Dow Industrial Hygiene Guideline |
| TWA     | Time weighted average            |

**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

DOW CHEMICAL INTERNATIONAL PVT. LTD. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

IN