Material Safety Data Sheet

DOW CHEMICAL INTERNATIONAL PVT. LTD.

Product name: TERGITOL™ NP-8 Surfactant **Issue Date:** 31.10.2019
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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.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: TERGITOL™ NP-8 Surfactant

Recommended use of the chemical and restrictions on use
Identified uses: Multi-purpose surfactant. NOTICE! NOT TO BE USED AS A BIOCIDE IN INTRAVAGINAL END-USE APPLICATIONS (INCLUDING SPERMICIDES). FOR INDUSTRY USE ONLY.

COMPANY IDENTIFICATION
DOW CHEMICAL INTERNATIONAL PVT. LTD.
UNIT NO. 801, 8th FLOOR, BUILDING NO. 9,
GIGAPLEX,
TTC INDUSTRIAL AREA, MIDC, AIROLI
NAVI, MUMBAI
400708 NAVI, 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

2. HAZARDS IDENTIFICATION

GHS Classification
Acute toxicity - Category 4 - Oral
Acute toxicity - Category 4 - Inhalation
Acute toxicity - Category 5 - Dermal
Serious eye damage/eye irritation - Category 1
Short-term (acute) aquatic hazard - Category 2
Long-term (chronic) aquatic hazard - Category 2

GHS label elements
Hazard pictograms

Signal word: **DANGER!**

Hazard statements
Harmful if swallowed or if inhaled.
May be harmful in contact with skin.
Causes serious eye damage.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention
Avoid breathing dust, fume, gas, mist, vapours and/or spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear eye protection and/or face protection.

Response
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER and/or 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. Immediately call a POISON CENTER and/or doctor.
Collect spillage.

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

Other hazards
Slipping hazard.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a substance.

Component	CASRN	Concentration
4-Nonylphenol branched, ethoxylated	127087-87-0	>= 97.0 %
Poly(ethylene oxide)	25322-68-3	<= 3.0 %

Dinonylphenyl polyoxyethylene	9014-93-1	<= 2.0 %
Branched 4-nonylphenol	84852-15-3	<= 0.02 %

4. FIRST AID MEASURES

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. 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.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

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. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Water fog or fine spray.. Dry chemical fire extinguishers.. Carbon dioxide fire extinguishers.. Foam.. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective..

Unsuitable extinguishing media: Do not use direct water stream.. May spread fire..

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.. Combustion products may include and are not limited to:. Carbon monoxide.. Carbon dioxide..

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation.. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids..

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry.. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles.. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container.. Burning liquids may be extinguished by dilution with water.. Do not use direct water stream. May spread fire.. Move container from fire area if this is possible without hazard.. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage..

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).. If protective equipment is not available or not used, fight fire from a protected location or safe distance..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Sand. Dirt. Do not use water for cleanup. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes. Do not swallow. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Conditions for safe storage: No specific requirements. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact. The shelf life given is for unopened containers stored under moderate temperature conditions.

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
Poly(ethylene oxide)	US WEEL	TWA aerosol	10 mg/m3

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

Eye/face protection: Use chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. 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: Wear clean, body-covering clothing.

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.
Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2 (meeting standard EN 14387).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquid.
Color	Yellow
Odor	Mild
Odor Threshold	No test data available
pH	No test data available
Melting point/range	Not applicable to liquids
Freezing point	0 °C *Calculated.*
Boiling point (760 mmHg)	> 200 °C *Calculated.*
Flash point	**closed cup** 243.3 °C *ASTM D 93*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not applicable to liquids
Flammability (liquids)	Not expected to be a static-accumulating flammable liquid.
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	< 0.01 mmHg at 20 °C *Calculated.*
Relative Vapor Density (air = 1)	>19.7 *Calculated.*
Relative Density (water = 1)	1.059 at 20 °C / 20 °C *Calculated.*
Water solubility	partly soluble
Partition coefficient: n-octanol/water	log Pow: 2.1 - 3.4 *Calculated.*
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	No test data available
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	572 g/mol *Calculated.* Average
Molecular formula	C32 H58 O9.5 (Average)

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

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Thermally stable at typical use temperatures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials.. Decomposition products can include and are not limited to:. Aldehydes.. Ketones.. Organic acids..

11. TOXICOLOGICAL INFORMATION

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

Information on likely routes of exposure
Ingestion, Inhalation, Skin contact, Eye contact.

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

Acute oral toxicity
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

Typical for this family of materials.
LD50, Rat, 960 - 3,980 mg/kg

Information for components:

4-Nonylphenol branched, ethoxylated
Typical for this family of materials. LD50, Rat, 960 - 3,980 mg/kg

Poly(ethylene oxide)
Typical for this family of materials. LD50, Rat, > 10,000 mg/kg Estimated.

Dinonylphenyl polyoxyethylene
May cause abdominal discomfort or diarrhea. LD50, Rat, 8,200 mg/kg

Branched 4-nonylphenol
LD50, Rat, >1,000 mg/kg Estimated.

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

Typical for this family of materials.
LD50, Rabbit, 2,000 - 2,991 mg/kg

Information for components:

4-Nonylphenol branched, ethoxylated
Typical for this family of materials. LD50, Rabbit, 2,000 - 2,991 mg/kg

Poly(ethylene oxide)

Typical for this family of materials. LD50, Rabbit, > 20,000 mg/kg

Dinonylphenyl polyoxyethylene
The dermal LD50 has not been determined.

Branched 4-nonylphenol
LD50, Rabbit, 2,031 - 2,831 mg/kg

Acute inhalation toxicity
Prolonged excessive exposure to mist may cause serious adverse effects, even death. Vapor may cause irritation of the upper respiratory tract (nose and throat).

Typical for this family of materials.
LC50, Rat, 4 Hour, dust/mist, 1.15 mg/l
Information for components:

4-Nonylphenol branched, ethoxylated
Typical for this family of materials. LC50, Rat, 4 Hour, dust/mist, 1.15 mg/l

Poly(ethylene oxide)
Typical for this family of materials. LC50, Rat, 6 Hour, dust/mist, > 2.5 mg/l No deaths occurred at this concentration.

Dinonylphenyl polyoxyethylene
The LC50 has not been determined.

Branched 4-nonylphenol
LC50, Mouse, female, vapour, > 3.636 mg/l

Skin corrosion/irritation
Based on testing for product(s) in this family of materials:
Prolonged contact may cause slight skin irritation with local redness.

Information for components:

4-Nonylphenol branched, ethoxylated
Prolonged contact may cause slight skin irritation with local redness.

Poly(ethylene oxide)
Prolonged exposure not likely to cause significant skin irritation.
May cause more severe response if skin is abraded (scratched or cut).

Dinonylphenyl polyoxyethylene
Prolonged contact may cause slight skin irritation with local redness.

Branched 4-nonylphenol
Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage.

Serious eye damage/eye irritation
Based on testing for product(s) in this family of materials:
May cause severe eye irritation.
May cause severe corneal injury.

Information for components:

4-Nonylphenol branched, ethoxylated
May cause severe eye irritation.
May cause severe corneal injury.

Poly(ethylene oxide)
May cause slight temporary eye irritation.
Corneal injury is unlikely.

Dinonylphenyl polyoxyethylene
Liquid may cause severe eye irritation with corneal injury. Corneal burns may occur.
Vapor or mist may cause eye irritation.

Branched 4-nonylphenol
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Sensitization
For this family of materials:
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Information for components:

4-Nonylphenol branched, ethoxylated
For this family of materials:
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Poly(ethylene oxide)
For this family of materials:
Did not cause allergic skin reactions when tested in humans.
For this family of materials, sensitization studies done in guinea pigs have been negative.

For respiratory sensitization:
No relevant data found.

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

For respiratory sensitization:
No relevant data found.

Branched 4-nonylphenol
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)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Information for components:

4-Nonylphenol branched, ethoxylated
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Poly(ethylene oxide)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

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

Branched 4-nonylphenol
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:

4-Nonylphenol branched, ethoxylated
Based on physical properties, not likely to be an aspiration hazard.

Poly(ethylene oxide)
Based on physical properties, not likely to be an aspiration hazard.

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

Branched 4-nonylphenol
Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

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)
For this family of materials:
In animals, effects have been reported on the following organs:
Kidney.
Liver.

Information for components:

4-Nonylphenol branched, ethoxylated
For this family of materials:
In animals, effects have been reported on the following organs:
Kidney.
Liver.

Poly(ethylene oxide)

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.
The use of topical applications containing this material may not be appropriate in severely burned patients.
This product should not be used in patients with kidney disease; these effects would not result from normal industrial handling.

Dinonylphenyl polyoxyethylene
No relevant data found.

Branched 4-nonylphenol
In animals, effects have been reported on the following organs:
Liver.
Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

Carcinogenicity
For this family of materials: Did not cause cancer in laboratory animals.

Information for components:

4-Nonylphenol branched, ethoxylated
For this family of materials: Did not cause cancer in laboratory animals.

Poly(ethylene oxide)
Polyethylene glycols did not cause cancer in long-term animal studies.

Dinonylphenyl polyoxyethylene
No relevant data found.

Branched 4-nonylphenol
No relevant data found.

Teratogenicity
For this family of materials: Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Information for components:

4-Nonylphenol branched, ethoxylated
For this family of materials: Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Poly(ethylene oxide)
Did not cause birth defects or any other fetal effects in laboratory animals.

Dinonylphenyl polyoxyethylene
No relevant data found.

Branched 4-nonylphenol
Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive toxicity

No relevant data found.

Information for components:

4-Nonylphenol branched, ethoxylated
No relevant data found.

Poly(ethylene oxide)
In animal studies, did not interfere with reproduction.

Dinonylphenyl polyoxyethylene
No relevant data found.

Branched 4-nonylphenol
In a three-generation reproduction study in rats, nonylphenol did not interfere with standard reproductive parameters. However, some additional endpoints which are considered markers of potential reproductive toxicity were affected at higher doses that produced systemic toxicity to the parent animals.

Mutagenicity
For this family of materials: In vitro genetic toxicity studies were negative.

Information for components:

4-Nonylphenol branched, ethoxylated
For this family of materials: In vitro genetic toxicity studies were negative.

Poly(ethylene oxide)
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Dinonylphenyl polyoxyethylene
No relevant data found.

Branched 4-nonylphenol
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION

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

Ecotoxicity

Acute toxicity to fish
For this family of materials:
Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

For this family of materials:
LC50, Pimephales promelas (fathead minnow), 96 Hour, 3.8 - 6.2 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
For this family of materials:

LC50, Daphnia magna (Water flea), 48 Hour, 9.3 - 21.4 mg/l, OECD Test Guideline 202 or Equivalent

Toxicity to bacteria
For this family of materials:
IC50, Bacteria, 16 Hour, > 1,000 mg/l

Persistence and degradability

Biodegradability: For this family of materials: 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.
10-day Window: Not applicable
Biodegradation: < 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 2.15 - 2.25 mg/mg

Bioaccumulative potential

Bioaccumulation: For this family of materials:
Partition coefficient: n-octanol/water(log Pow): 2.1 - 3.4 Calculated.
Bioconcentration factor (BCF): 5.9 - 48 Fish Estimated.

Mobility in Soil

No relevant data found.

Results of PBT and vPvB assessment

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

Other adverse effects

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

13. DISPOSAL CONSIDERATIONS

Disposal methods: This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water.

14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport:

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Nonylphenol polyethylene glycol ether)
UN number	UN 3082
Class	9
Packing group	III
Environmental hazards	Nonylphenol polyethylene glycol ether

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Nonylphenol polyethylene glycol ether)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Nonylphenol polyethylene glycol ether
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	Environmentally hazardous substance, liquid, n.o.s.(Nonylphenol polyethylene glycol ether)
UN number	UN 3082
Class	9
Packing group	III

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.

15. REGULATORY INFORMATION

This product has been classified in accordance with the criteria of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), rev. 7.

16. OTHER INFORMATION

Product Literature
Additional information on this and other products may be obtained by visiting our web page. Additional information on this product may be obtained by calling your sales or customer service contact. Ask for a product brochure.

Revision
Identification Number: 99195135 / A146 / Issue Date: 31.10.2019 / Version: 6.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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