



# Material Safety Data Sheet

DOW CHEMICAL INTERNATIONAL PVT. LTD.

**Product name: ECOSURF™ LF-30 Surfactant**

**Issue Date: 31.08.2021**

**Print Date: 06.08.2022**

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:** ECOSURF™ LF-30 Surfactant

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

**Identified uses:** Multi-purpose surfactant. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

### **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

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## 2. HAZARDS IDENTIFICATION

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### **GHS Classification**

Acute toxicity - Category 4 - Oral  
Serious eye damage/eye irritation - Category 2A  
Short-term (acute) aquatic hazard - Category 2  
Long-term (chronic) aquatic hazard - Category 3

### **GHS label elements**

**Hazard pictograms**



Signal word: **WARNING!**

**Hazard statements**

Harmful if swallowed.  
Causes serious eye irritation.  
Toxic to aquatic life.  
Harmful to aquatic life with long lasting effects.

**Precautionary statements****Prevention**

Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Avoid release to the environment.  
Wear eye protection/ face protection.

**Response**

IF SWALLOWED: Get medical help. Rinse mouth.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical help.

**Disposal**

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

**Other hazards**

Slipping hazard.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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This product is a substance.

<b>Component</b>	<b>CASRN</b>	<b>Concentration</b>
Alcohols,C12-14- Secondary,Ethoxylated,Butoxylat ed	1013910-41-2	> 99.0 %

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

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## 5. FIREFIGHTING MEASURES

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### 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:** 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.. Burning liquids may be extinguished by dilution with water.. Do not use direct water stream. May spread fire.. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS..

**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..

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## 6. ACCIDENTAL RELEASE MEASURES

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

**Environmental precautions:** Spills or discharge to natural waterways is likely to kill aquatic organisms. 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.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** Avoid contact with eyes. Do not swallow. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**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.

### Storage stability

**Shelf life: Use within**  
24 Month

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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.

### 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 chemical goggles.

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Polyvinyl alcohol ("PVA"). Avoid gloves made of: Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). 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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

Physical state	Liquid.
Color	Colorless to yellow
Odor	Mild
Odor Threshold	No test data available
pH	5 - 8 1% ASTM E70
Melting point/range	Not applicable to liquids
Freezing point	See Pour Point
Boiling point (760 mmHg)	decomposes prior to boiling
Flash point	<b>closed cup</b> No test data available
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 <i>Estimated.</i>
Relative Vapor Density (air = 1)	>1 <i>Estimated.</i>
Relative Density (water = 1)	0.9836 at 40 °C / 40 °C <i>Calculated.</i>

<b>Water solubility</b>	Disperses in water
<b>Partition coefficient: n-octanol/water</b>	log Pow: 2.85 - 4.30 <i>Measured</i>
<b>Auto-ignition temperature</b>	No test data available
<b>Decomposition temperature</b>	No test data available
<b>Kinematic Viscosity</b>	36.096 cSt at 40 °C <i>ASTM D 445</i>
<b>Explosive properties</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Molecular weight</b>	No test data available
<b>Pour point</b>	-5 °C <i>ASTM D97</i>

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:** 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.

**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..

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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

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.

Based on testing for product(s) in this family of materials:  
LD50, Rat, female, 2,000 mg/kg

**Information for components:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

Typical for this family of materials. LD50, Rat, female, 2,000 mg/kg

**Acute dermal toxicity**

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

Based on testing for product(s) in this family of materials:

LD50, Rat, male and female, > 2,000 mg/kg No deaths occurred at this concentration.

**Information for components:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

Typical for this family of materials. LD50, Rat, male and female, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity**

At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

As product: The LC50 has not been determined.

**Information for components:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

The LC50 has not been determined.

**Skin corrosion/irritation**

Based on testing for product(s) in this family of materials:

Essentially nonirritating to skin.

**Information for components:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

Essentially nonirritating to skin.

**Serious eye damage/eye irritation**

Based on testing for product(s) in this family of materials:

May cause moderate eye irritation.

May cause corneal injury.

**Information for components:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

May cause moderate eye irritation.

May cause corneal injury.

**Sensitization**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Information for components:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

For skin sensitization:  
No relevant data found.

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:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

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:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

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

**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:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

No relevant data found.

**Carcinogenicity**

No relevant data found.

**Information for components:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

No relevant data found.

**Teratogenicity**

No relevant data found.

**Information for components:**

**Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

No relevant data found.



**Reproductive toxicity**

No relevant data found.

**Information for components:****Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

No relevant data found.

**Mutagenicity**

In vitro genetic toxicity studies were negative.

**Information for components:****Alcohols,C12-14-Secondary,Ethoxylated,Butoxylated**

In vitro 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.*

**Ecotoxicity****Acute toxicity to aquatic invertebrates**

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).

For this family of materials:

EC50, Daphnia magna (Water flea), static test, 48 Hour, 4.22 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

For this family of materials:

ErC50, Desmodesmus subspicatus (green algae), 72 Hour, Growth rate, 1.25 mg/l, OECD Test Guideline 201 or Equivalent

For this family of materials:

NOEC, Desmodesmus subspicatus (green algae), 72 Hour, Growth rate, 0.375 mg/l, OECD Test Guideline 201 or Equivalent

**Persistence and degradability**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

For this family of materials: 10-day Window: Not applicable

**Biodegradation:** > 60 %

**Exposure time:** 28 d

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

**Bioaccumulative potential**

**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

**Partition coefficient: n-octanol/water(log Pow):** 2.85 - 4.30 Measured

**Bioconcentration factor (BCF):** 4.3 - 222 Fish Measured

**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.

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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.

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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  
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

**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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### 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.

### Hazard Rating System

#### NFPA

Health	Flammability	Instability
1	1	0

### Revision

Identification Number: 99070023 / A146 / Issue Date: 31.08.2021 / Version: 2.0

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

### Full text of other abbreviations

AIIIC - 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; TECI - Thailand Existing Chemicals 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; 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.

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