



# Material Safety Data Sheet

DOW CHEMICAL INTERNATIONAL PVT. LTD.

**Product name:** Butyl CELLOSOLVE™ Solvent

**Issue Date:** 16.10.2023

**Print Date:** 17.10.2023

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:** Butyl CELLOSOLVE™ Solvent

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

**Identified uses:** Industrial solvent for cleaner and coating formulations. 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

Flammable liquids - Category 4  
Acute toxicity - Category 4 - Oral  
Acute toxicity - Category 4 - Inhalation  
Acute toxicity - Category 5 - Dermal  
Skin corrosion/irritation - Category 2  
Serious eye damage/eye irritation - Category 2A

### GHS label elements

**Hazard pictograms**



Signal word: **WARNING!**

**Hazard statements**

Combustible liquid.  
Harmful if swallowed or if inhaled.  
May be harmful in contact with skin.  
Causes skin irritation.  
Causes serious eye irritation.

**Precautionary statements**

**Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Avoid breathing mist or vapours.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

**Response**

IF SWALLOWED: Get medical help. Rinse mouth.  
IF ON SKIN: Wash with plenty of water. Get medical help.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If skin irritation occurs: Get medical help.  
If eye irritation persists: Get medical help.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage**

Store in a well-ventilated place.

**Disposal**

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

**Other hazards**

No data available

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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This product is a substance.

Component	CASRN	Concentration
Ethylene glycol monobutyl ether	111-76-2	> 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. Suitable emergency safety shower facility should be available in work area.

**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:** Do not induce vomiting. Seek medical attention immediately. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 Cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounce (1 1/2 tsp.) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight [e.g., 1.2 ounce (2 1/3 tbsp.) for a 40 pound child or 36 ml for an 18 kg child].

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

Harmful if swallowed or if inhaled. May be harmful in contact with skin. Causes skin irritation. Causes serious eye irritation.

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

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. Due to structural analogy and clinical data, this material may have a mechanism of intoxication similar to ethylene glycol. On that basis, treatment similar to ethylene glycol intoxication may be of benefit. In cases where several ounces (60 - 100 ml) have been ingested, consider the use of ethanol and hemodialysis in the treatment. Consult standard literature for details of treatment. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure

should be observed 24-48 hours for signs of respiratory distress. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. 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:** No data available

### 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.. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.. 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).. Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location.. For protective equipment in post-fire or non-fire clean-up situations, see Section 8 of the safety data sheet..

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. No smoking in area. 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. Small spills: Absorb with materials such as: Non-combustible material. Clay. Zorb-all®. Large spills: Dike area to contain spill. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Keep away from heat, sparks and flame. Do not swallow. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. 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:** Store in the following material(s): Carbon steel. Stainless steel. Phenolic lined steel drums. Do not store in: Aluminum. Copper. Galvanized iron. Galvanized steel. See Section 10 for more specific information.

### Storage stability

#### Storage Period:

**Steel drums.**

24 Month

**Bulk**

6 Month

## 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
Ethylene glycol monobutyl ether	ACGIH	TWA	20 ppm
	Further information: A3: Confirmed animal carcinogen with unknown relevance to humans		

### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Ethylene glycol	111-76-2	Butoxyaceti	Urine	End of	200 mg/g	ACGIH

monobutyl ether	c acid (BAA)	shift (As soon as possible after exposure ceases)	creatinine	BEI
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**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. 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: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: 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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

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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**Appearance**

<b>Physical state</b>	Liquid.
<b>Color</b>	Colorless
<b>Odor</b>	Mild
<b>Odor Threshold</b>	No test data available
<b>pH</b>	No test data available
<b>Melting point/range</b>	Not applicable to liquids
<b>Freezing point</b>	-75 °C <i>Literature</i>
<b>Boiling point (760 mmHg)</b>	171 °C <i>Literature</i>

<b>Flash point</b>	<b>closed cup</b> 67 °C <i>Literature</i>
<b>Evaporation Rate (Butyl Acetate = 1)</b>	0.06 <i>Literature</i>
<b>Flammability (solid, gas)</b>	Not applicable to liquids
<b>Flammability (liquids)</b>	Not expected to be a static-accumulating flammable liquid.
<b>Lower explosion limit</b>	1.3 % vol <i>Literature</i>
<b>Upper explosion limit</b>	10.6 % vol <i>Literature</i>
<b>Vapor Pressure</b>	0.87 mmHg at 20 °C <i>ASTM E1719</i>
<b>Relative Vapor Density (air = 1)</b>	No test data available
<b>Relative Density (water = 1)</b>	0.9005 - 0.9040 at 20 °C / 20 °C <i>Hydrometer</i>
<b>Water solubility</b>	> 1,000 g/L at 20 °C <i>Literature</i>
<b>Partition coefficient: n-octanol/water</b>	log Pow: 0.81 <i>Measured</i>
<b>Auto-ignition temperature</b>	230 °C <i>Literature</i>
<b>Decomposition temperature</b>	No test data available
<b>Dynamic Viscosity</b>	3.3 mPa.s at 20 °C <i>Literature</i>
<b>Kinematic Viscosity</b>	3.7 mm <sup>2</sup> /s at 20 °C <i>Literature</i>
<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	No
<b>Liquid Density</b>	0.902 g/cm <sup>3</sup> at 20 °C <i>Literature</i>
<b>Molecular weight</b>	118.2 g/mol <i>Literature</i>
<b>Surface tension</b>	65 mN/m <i>Literature</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:** Do not distill to dryness. Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

**Incompatible materials:** Avoid contact with: Strong acids. 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..

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data are 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 Toxicity Endpoints:**

Harmful if swallowed or if inhaled., May be harmful in contact with skin.

**Acute oral toxicity**

**Information for the Product:**

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. In animals, effects have been reported on the following organs: blood (hemolysis) and secondary effects on the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits. Massive ingestion of ethylene glycol monobutyl ether (attempted suicides) may produce metabolic acidosis and subsequent secondary effects such as hemolysis, central nervous system and kidney effects.

Based on product testing:

LD50, 1,200 mg/kg

**Information for components:**

**Ethylene glycol monobutyl ether**

In animals, effects have been reported on the following organs: blood (hemolysis) and secondary effects on the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits. LD50, 1,200 mg/kg

**Acute dermal toxicity**

**Information for the Product:**

Prolonged skin contact to animals which are less sensitive to hemolysis, as are humans, did not result in the absorption of harmful amounts.

Based on product testing:

LD50, Guinea pig, > 2,000 mg/kg

**Information for components:**

**Ethylene glycol monobutyl ether**

Humans and guinea pigs are resistant to blood effects that are seen for rodents and rabbits. For this reason, the guinea pig data is used as the basis for the acute toxicity classification as it is a better model to assess acute toxicity to humans. LD50, Guinea pig, > 2,000 mg/kg

**Acute inhalation toxicity**



**Information for the Product:**

Excessive exposure may cause irritation to upper respiratory tract (nose and throat). In humans, symptoms may include: Headache. In animals, effects have been reported on the following organs: blood (hemolysis) and secondary effects on the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits.

Based on product testing:

LC0, Guinea pig, 1 Hour, vapour, > 3.1 mg/l No deaths occurred at this concentration.

**Information for components:**

**Ethylene glycol monobutyl ether**

In animals, effects have been reported on the following organs: blood (hemolysis) and secondary effects on the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits. LC0, Guinea pig, 1 Hour, vapour, > 3.1 mg/l No deaths occurred at this concentration.

**Skin corrosion/irritation**

Causes skin irritation.

**Information for the Product:**

Based on product testing:

Brief contact may cause slight skin irritation with local redness.

Repeated exposure may cause irritation, even a burn.

May cause more severe response on covered skin (under clothing, gloves).

**Information for components:**

**Ethylene glycol monobutyl ether**

Brief contact may cause slight skin irritation with local redness.

Repeated exposure may cause irritation, even a burn.

May cause more severe response on covered skin (under clothing, gloves).

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Information for the Product:**

Based on product testing:

May cause severe eye irritation.

May cause moderate corneal injury.

Effects may be slow to heal.

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

**Information for components:**

**Ethylene glycol monobutyl ether**

May cause severe eye irritation.

May cause moderate corneal injury.

Effects may be slow to heal.

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

### **Sensitization**

**For skin sensitization:**

Not classified based on available information.

**For respiratory sensitization:**

Not classified based on available information.

**Information for the Product:**

For skin sensitization:

Did not cause allergic skin reactions when tested in humans.

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

For respiratory sensitization:

No relevant data found.

**Information for components:**

**Ethylene glycol monobutyl ether**

Did not cause allergic skin reactions when tested in humans.

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)**

Not classified based on available information.

**Information for the Product:**

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

**Information for components:**

**Ethylene glycol monobutyl ether**

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

### **Aspiration Hazard**

Not classified based on available information.

**Information for the Product:**

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

**Information for components:**

**Ethylene glycol monobutyl ether**

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)**

Not classified based on available information.

**Information for the Product:**

In animals, effects have been reported on the following organs: blood (hemolysis) and secondary effects on the kidney and liver.  
Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits.

**Information for components:**

**Ethylene glycol monobutyl ether**

In animals, effects have been reported on the following organs: blood (hemolysis) and secondary effects on the kidney and liver.  
Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits.

**Carcinogenicity**

Not classified based on available information.

**Information for the Product:**

In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.

**Information for components:**

**Ethylene glycol monobutyl ether**

In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.

**Teratogenicity**

Not classified based on available information.

**Information for the Product:**

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:**

**Ethylene glycol monobutyl ether**

Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

### **Reproductive toxicity**

Not classified based on available information.

#### **Information for the Product:**

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

#### **Information for components:**

##### **Ethylene glycol monobutyl ether**

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

### **Mutagenicity**

Not classified based on available information.

#### **Information for the Product:**

Based on product testing: In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were negative.

#### **Information for components:**

##### **Ethylene glycol monobutyl ether**

In vitro genetic toxicity studies were predominantly 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 are available.*

### **Ecotoxicity**

#### **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), static test, 96 Hour, 1,464 mg/l, OECD Test Guideline 203

#### **Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 1,550 mg/l, OECD Test Guideline 202

#### **Acute toxicity to algae/aquatic plants**

EbC50, *Pseudokirchneriella subcapitata* (green algae), static test, 72 Hour, Biomass, 911 mg/l, OECD Test Guideline 201

#### **Toxicity to bacteria**

IC50, Bacteria, Growth inhibition, > 1,000 mg/l

**Long-term (chronic) aquatic hazard**

**Chronic toxicity to fish**

NOEC, Danio rerio (zebra fish), semi-static test, 21 d, > 100 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, Other, 100 mg/l

**Persistence and degradability**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material has inherent, ultimate biodegradability according to OECD test (s) guidelines (reaches > 60 or 70% biodegradation in OECD test(s)).

10-day Window: Pass

**Biodegradation:** 90.4 %

**Exposure time:** 28 d

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

**Theoretical Oxygen Demand:** 2.30 mg/mg

**Chemical Oxygen Demand:** 2.21 mg/mg Dichromate

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	5.2 %
10 d	57 %
20 d	72.2 %

**Bioaccumulative potential**

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

**Partition coefficient: n-octanol/water(log Pow):** 0.81 Measured

**Bioconcentration factor (BCF):** 3.2 Fish

**Mobility in Soil**

**Partition coefficient (Koc):** 67 Estimated.

**Results of PBT and vPvB assessment**

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).

**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 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 SDS SECTION 1: Identified Uses. 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 product may be obtained by calling your sales or customer service contact.

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

Health	Flammability	Instability
2	2	0

**Revision**

Identification Number: 181798 / A146 / Issue Date: 16.10.2023 / Version: 11.0

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)
TWA	8-hour, time-weighted average

**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; IECS - 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

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