



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

**Product name:** CELLOSIZE™ Hydroxyethyl Cellulose QP-4400H Europe, CGR

**Issue Date:** 02/14/2024

**Print Date:** 02/15/2024

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

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## 1. IDENTIFICATION

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**Product name:** CELLOSIZE™ Hydroxyethyl Cellulose QP-4400H Europe, CGR

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

**Identified uses:** Thickener. Binder. Film former. Stabiliser. Protective colloid. 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**

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

**Customer Information Number:**

800-258-2436  
SDSQuestion@dow.com

### **EMERGENCY TELEPHONE NUMBER**

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

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

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## 2. HAZARDS IDENTIFICATION

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### **Hazard classification**

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)  
Combustible dust

### **Label elements**

Signal word: **WARNING!**

### **Hazards**

May form combustible dust concentrations in air.

### **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
Hydroxyethyl Cellulose	9004-62-0	> 80.0 - <= 100.0 %
Sodium acetate	127-09-3	<= 6.5 %
Isopropanol	67-63-0	<= 3.0 %

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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. 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:** 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:** 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. Hemodialysis may be of benefit if substantial amounts have been ingested and the patient is showing signs of intoxication. Consider hemodialysis for patients with persistent hypotension or coma unresponsive to standard therapy (isopropanol levels >400 - 500 mg/dl). (Goldfrank, Toxicological Emergencies 7th ed., 2002; King, JAMA, 1970, 211:1855). 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.. Dry chemical fire extinguishers.. Carbon dioxide fire extinguishers..

**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:** Do not permit dust to accumulate. When suspended in air dust can pose an explosion hazard. Minimize ignition sources. If dust layers are exposed to elevated temperatures, spontaneous combustion may occur.. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge..

### Advice for firefighters

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry.. Soak thoroughly with water to cool and prevent re-ignition.. Cool surroundings with water to localize fire zone.. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires.. Dust explosion hazard may result from forceful application of fire extinguishing agents..

**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. Spilled material may cause a slipping hazard. Material becomes slippery when wet. 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:** Sweep up. Use care to minimize generation of airborne dust. 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. Wash thoroughly after handling. Good housekeeping and controlling of dusts are necessary for safe handling of product. No smoking, open flames or sources of ignition in handling and storage area. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Keep away from heat, sparks and flame. Powdered material may form explosive dust-air mixture. Keep container closed. Buildup of flammable/air mixtures is possible without adequate ventilation. Use only with adequate ventilation. Ventilate shipping container before entering. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Keep in a dry place. Store indoors. Store in a closed container. Store away from sources of heat or ignition. See Section 10 for more specific information.

## 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
Isopropanol	ACGIH	TWA	200 ppm
	Further information: A4: Not classifiable as a human carcinogen		
	ACGIH	STEL	400 ppm
	Further information: A4: Not classifiable as a human carcinogen		
	OSHA Z-1	TWA	980 mg/m3 400 ppm

### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Isopropanol	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

### 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:** Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

**Other protection:** No precautions other than clean body-covering clothing should be needed.

**Respiratory protection:** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive-

pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

Physical state	Powder
Color	White
Odor	Mild
Odor Threshold	Not relevant
pH	5.5 - 8.0 <i>Unspecified</i> Aqueous solution
Melting point/range	Decomposes before melting.
Freezing point	Solid.
Boiling point (760 mmHg)	Not applicable to solids
Flash point	<b>closed cup</b> No data available
Evaporation Rate (Butyl Acetate = 1)	Not applicable to solids
Flammability (solid, gas)	May form combustible dust concentrations in air.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	Not applicable to solids
Relative Density (water = 1)	1.3 <i>Volume Displacement</i>
Water solubility	completely miscible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	$\geq 400$ °C ( $\geq 752$ °F) <i>Unspecified</i>
Decomposition temperature	<i>Differential Scanning Calorimetry (DSC)</i> Decomposes on heating.
Kinematic Viscosity	Solid.
Explosive properties	Not impact sensitive.
Oxidizing properties	No
Molecular weight	No test 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:** No data available

**Chemical stability:** Thermally stable at typical use temperatures. Hygroscopic

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Avoid temperatures above 200°C (392°F) Exposure to elevated temperatures can cause product to decompose. Avoid static discharge. Avoid moisture.

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

**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 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:

Not classified based on available information.

#### Acute oral toxicity

##### Information for the Product:

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

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:

#### Hydroxyethyl Cellulose

LD50, Rat, > 5,000 mg/kg

#### Sodium acetate

LD50, Rat, > 3,500 mg/kg

#### Isopropanol

May cause central nervous system depression. Signs and symptoms of excessive exposure may include: Facial flushing. Low blood pressure. Irregular heartbeats. May cause nausea and vomiting.

LD50, Rat, 5,840 mg/kg OECD 401 or equivalent

### **Acute dermal toxicity**

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

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:**

##### **Hydroxyethyl Cellulose**

The dermal LD50 has not been determined.

For similar material(s): LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

##### **Sodium acetate**

LD50, Rabbit, > 10,000 mg/kg

##### **Isopropanol**

LD50, Rabbit, > 12,800 mg/kg

### **Acute inhalation toxicity**

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

Dust may cause irritation to upper respiratory tract (nose and throat). Excessive exposure (400 ppm) to isopropanol may cause eye, nose and throat irritation. Incoordination, confusion, hypotension, hypothermia, circulatory collapse, respiratory arrest and death may follow a longer duration or higher levels. Observations in animals include middle ear lining damage upon exposure to vapors of isopropanol. However, the relevance of this to humans is unknown

As product: The LC50 has not been determined.

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

##### **Hydroxyethyl Cellulose**

The LC50 has not been determined.

##### **Sodium acetate**

LC50, Rat, 1 Hour, dust/mist, > 30 mg/l No deaths occurred at this concentration.

##### **Isopropanol**

LC50, Rat, male and female, 6 Hour, vapour, > 10000 ppm

### **Skin corrosion/irritation**

Not classified based on available information.

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

Based on information for component(s):  
Prolonged exposure not likely to cause significant skin irritation.

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

##### **Hydroxyethyl Cellulose**

Prolonged contact is essentially nonirritating to skin.

##### **Sodium acetate**

Prolonged exposure not likely to cause significant skin irritation.

##### **Isopropanol**

Prolonged exposure not likely to cause significant skin irritation.  
May cause drying and flaking of the skin.

### **Serious eye damage/eye irritation**

Not classified based on available information.

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

Based on information for component(s):  
May cause slight eye irritation.  
May cause pain disproportionate to the level of irritation to eye tissues.

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

##### **Hydroxyethyl Cellulose**

Essentially nonirritating to eyes.

##### **Sodium acetate**

May cause slight eye irritation.  
Corneal injury is unlikely.

##### **Isopropanol**

May cause pain disproportionate to the level of irritation to eye tissues.  
May cause moderate eye irritation.  
May cause moderate corneal injury.  
Vapor may cause eye irritation experienced as mild discomfort and redness.  
Vapor may cause lacrimation (tears).

### **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:

Does not contain any components that are sensitizers.

For respiratory sensitization:

No relevant data found.

**Information for components:**

**Hydroxyethyl Cellulose**

Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:

No relevant data found.

**Sodium acetate**

A similar material did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:

No relevant data found.

**Isopropanol**

Did not demonstrate the potential for contact allergy in mice.

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:**

**Hydroxyethyl Cellulose**

Available data are inadequate to determine single exposure specific target organ toxicity.

**Sodium acetate**

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

**Isopropanol**

May cause drowsiness or dizziness.

Route of Exposure: Ingestion

Target Organs: Central nervous system

### 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:

##### Hydroxyethyl Cellulose

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

##### Sodium acetate

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

##### Isopropanol

Aspiration into the lungs may occur during ingestion or vomiting, resulting in rapid absorption and injury to other body systems.

**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:

Product test data not available.

#### Information for components:

##### Hydroxyethyl Cellulose

Repeated ingestion of similar cellulose by humans has not resulted in known significant adverse effects.

##### Sodium acetate

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

##### Isopropanol

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

Kidney.

Liver.

Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

Observations in animals include:

Lethargy.

### Carcinogenicity

Not classified based on available information.

**Information for the Product:**

Similar cellulosics did not cause cancer in long-term animal studies.

**Information for components:**

**Hydroxyethyl Cellulose**

Similar cellulosics did not cause cancer in long-term animal studies.

**Sodium acetate**

No relevant data found.

**Isopropanol**

Did not cause cancer in laboratory animals.

**Teratogenicity**

Not classified based on available information.

**Information for the Product:**

Product test data not available.

**Information for components:**

**Hydroxyethyl Cellulose**

Similar cellulosics did not cause birth defects or other toxic effects to the fetus in laboratory animal studies.

**Sodium acetate**

For similar material(s): Did not cause birth defects or any other fetal effects in laboratory animals.

**Isopropanol**

Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

**Reproductive toxicity**

Not classified based on available information.

**Information for the Product:**

In animal studies, a similar cellulosic has been shown not to interfere with reproduction.

**Information for components:**

**Hydroxyethyl Cellulose**

In animal studies, a similar cellulosic has been shown not to interfere with reproduction.

**Sodium acetate**

In animal studies, a similar material has been shown not to interfere with reproduction.

**Isopropanol**

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

### Mutagenicity

Not classified based on available information.

#### Information for the Product:

Similar cellulose were negative in both in vitro and animal genetic toxicity studies.

#### Information for components:

##### Hydroxyethyl Cellulose

For similar material(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

##### Sodium acetate

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

##### Isopropanol

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

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## 12. ECOLOGICAL INFORMATION

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

### Toxicity

#### Hydroxyethyl Cellulose

##### **Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

#### Sodium acetate

##### **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, Danio rerio (zebra fish), semi-static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203 or Equivalent

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

EC50, Daphnia magna (Water flea), static test, 48 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

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

Based on data from similar materials  
EC50, Skeletonema costatum (marine diatom), 72 Hour, > 1,000 mg/l, ISO 10253

##### **Toxicity to bacteria**

EC50, Bacteria, static test, 18 Hour, 7,200 mg/l

### Isopropanol

#### **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, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 9,640 mg/l, OECD Test Guideline 203 or Equivalent

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

LC50, Daphnia magna (Water flea), static test, 24 Hour, > 10,000 mg/l, OECD Test Guideline 202 or Equivalent

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

NOEC, alga Scenedesmus sp., static test, 7 d, Growth inhibition (cell density reduction), 1,800 mg/l  
ErC50, alga Scenedesmus sp., static test, 72 Hour, Growth rate inhibition, > 1,000 mg/l

#### **Toxicity to bacteria**

EC50, activated sludge, > 1,000 mg/l

#### **Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, 30 mg/l

### **Persistence and degradability**

#### **Biodegradability:**

For this family of materials: Material has inherent, primary biodegradability with pre-adaptation according to OECD test (s) guidelines (reaches > 20% biodegradation in OECD test(s)).

10-day Window: Not applicable

**Biodegradation:** 37.3 %

**Exposure time:** 60 d

**Method:** OECD Test Guideline 302B or Equivalent

### **Bioaccumulative potential**

#### Hydroxyethyl Cellulose

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

**Partition coefficient: n-octanol/water(log Pow):** -7.52 Estimated.

#### Sodium acetate

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

**Partition coefficient: n-octanol/water(log Pow):** -3.72 Estimated.

**Bioconcentration factor (BCF):** 10 Fish 3 d Measured

#### Isopropanol

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

**Partition coefficient: n-octanol/water(log Pow):** 0.05 Measured

### **Mobility in soil**

#### Hydroxyethyl Cellulose

**Partition coefficient (Koc):** 12000 Estimated.

#### Sodium acetate

Partition coefficient (Koc): 1 Estimated.

**Isopropanol**

Partition coefficient (Koc): 1.1 Estimated.

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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: Recycler. Reclaimer. Incinerator or other thermal destruction device. Landfill.

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### 14. TRANSPORT INFORMATION

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DOT

Not regulated for transport

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

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

Not regulated for transport  
Consult IMO regulations before transporting ocean bulk

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

Do Not Ship. Consult a DG specialist

**Further information:**

Do not ship by air except in sample sizes of less than 500g  
If shipped by sea, packaged product must be shipped in refrigerated containers.

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

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## 15. REGULATORY INFORMATION

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

Combustible dust

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

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

#### Components

Isopropanol

#### CASRN

67-63-0

### Pennsylvania Worker and Community Right-To-Know Act:

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

#### Components

Cellulose

#### CASRN

9004-34-6

### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### United States TSCA Inventory (TSCA)

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

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## 16. OTHER INFORMATION

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### Revision

Identification Number: 247340 / A001 / Issue Date: 02/14/2024 / Version: 10.1

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)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average

### Full text of other abbreviations

AllC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation,

and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECL - 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

### **Information Source and References**

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

THE DOW CHEMICAL COMPANY 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.

US