



Material Safety Data Sheet

The Dow Chemical Company

Product Name: CELLOSIZE (TM) HYDROXYETHYL CELLULOSE
QP-52000-H

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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.

1. Product and Company Identification

Product Name

CELLOSIZE (TM) HYDROXYETHYL CELLULOSE QP-52000-H

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Customer Information Number:

800-258-2436

SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact:

989-636-4400

Local Emergency Contact:

989-636-4400

2. Hazards Identification

Emergency Overview

Color: White

Physical State: Powder

Odor: Mild

Hazards of product:

CAUTION! May cause eye irritation. May form explosive dust-air mixture. Slipping hazard. Avoid temperatures above 200°C (392°F)

OSHA Hazard Communication Standard

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects

Eye Contact: May cause slight eye irritation. Solid or dust may cause irritation or corneal injury due to mechanical action.

Skin Contact: Prolonged exposure not likely to cause significant skin irritation. Repeated contact may cause slight skin irritation with local redness.

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

Inhalation: Dust may cause irritation to upper respiratory tract (nose and throat).

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

3. Composition Information

Component	CAS #	Amount
Hydroxyethyl cellulose	9004-62-0	>= 86.0 %
Sodium acetate	127-09-3	<= 7.5 %
Water	7732-18-5	<= 5.0 %
Cellulose	9004-34-6	<= 1.5 %

4. First-aid measures

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. May cause injury due to mechanical action.

Skin Contact: Wash skin with plenty of water.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

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

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

Emergency Personnel Protection: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

5. Fire Fighting Measures

Extinguishing Media: Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.

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.

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.

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.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: 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.

Personal Precautions: 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.

7. Handling and Storage

Handling

General 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. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

Store in a dry place. Protect from atmospheric moisture.

Shelf life: Use within 36 Months

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Cellulose	ACGIH	TWA	10 mg/m3
	OSHA Table Z-1	PEL Respirable fraction.	5 mg/m3
	OSHA Table Z-1	PEL Total dust.	15 mg/m3

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin Protection: Wear clean, body-covering clothing.

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). 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.

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 dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Particulate filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: 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.

9. Physical and Chemical Properties

Physical State	Powder
Color	White
Odor	Mild
Flash Point - Closed Cup	No test data available
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Autoignition Temperature	> 400 °C (> 752 °F) <i>Literature</i>
Vapor Pressure	Not applicable
Boiling Point (760 mmHg)	Not applicable.
Vapor Density (air = 1)	Not applicable
Specific Gravity (H2O = 1)	0.4 - 0.6 <i>Literature</i>
Freezing Point	Not applicable
Melting Point	No test data available
Solubility in water (by weight)	completely miscible with water
pH	6.0 - 7.0 <i>Literature</i>
Decomposition Temperature	No test data available
Partition coefficient, n-octanol/water (log Pow)	No data available for this product.

10. Stability and Reactivity

Stability/Instability

Thermally stable at typical use temperatures. Hygroscopic.

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 Polymerization

Will not occur.

Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials.

11. Toxicological Information

Acute Toxicity

Ingestion

Single dose oral LD50 has not been determined.

For the major component(s): Estimated. LD50, Rat > 8,700 mg/kg

Skin Absorption

The dermal LD50 has not been determined.

Sensitization

Skin

For the major component(s): Did not cause allergic skin reactions when tested in humans.

Repeated Dose Toxicity

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

Chronic Toxicity and Carcinogenicity

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

Developmental Toxicity

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

Reproductive Toxicity

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

Genetic Toxicology

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

12. Ecological Information

ENVIRONMENTAL FATE

Movement & Partitioning

Based largely or completely on component information. Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7). For the major component(s): Expected to be relatively immobile in soil (Koc > 5000). For the minor component(s) Potential for mobility in soil is very high (Koc between 0 and 50).

Persistence and Degradability

For the major component(s): No appreciable biodegradation is expected. For the minor component(s) Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

ECOTOXICITY

For the major component(s): Not expected to be acutely toxic to aquatic organisms. For the minor component(s): 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).

Toxicity to Micro-organisms

IC50; bacteria, 16 h: > 1,000 mg/l

13. Disposal Considerations

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: Landfill.

14. Transport Information

DOT Non-Bulk

NOT REGULATED

|| NOT REGULATED

|| NOT REGULATED

|| NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Immediate (Acute) Health Hazard	No
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Delayed (Chronic) Health Hazard	No
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Fire Hazard	No
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Reactive Hazard	No
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Sudden Release of Pressure Hazard	No
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Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Cellulose	9004-34-6	<= 1.5 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US, Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. Other Information

Product Literature

Additional information on this and other Dow products may be obtained by visiting our web page at www.dow.com.

Recommended Uses and Restrictions

Thickener. Film former. Stabiliser. Protective colloid. Binder. 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.

Revision

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

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

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.