Product Safety Assessment

WALOCEL™ Hydroxyethyl Methyl Cellulose


Select a Topic:
- Names
- Product Overview
- Manufacture of Product
- Product Description
- Product Uses
- Exposure Potential
- Health Information
- Environmental Information
- Physical Hazard Information
- Regulatory Information
- Additional Information
- References

Names
- CAS No. 9032-42-2
- Hydroxyethyl Methyl Cellulose
- Methyl Hydroxyethyl Cellulose
- WALOCEL™ M Series Hydroxyethyl Methyl Cellulose
- WALOCEL MKW Series Hydroxyethyl Methyl Cellulose
- WALOCEL MKX Series Hydroxyethyl Methyl Cellulose
- WALOCEL MW Series Hydroxyethyl Methyl Cellulose
- WALOCEL VP M-7701 Hydroxyethyl Methyl Cellulose
- WALOCEL MT 30000 PV Hydroxyethyl Methyl Cellulose
- WALOCEL MTX 4000 PF 01 Hydroxyethyl Methyl Cellulose
- WALOCEL MKW Series Modified Hydroxyethyl Methyl Cellulose
- WALOCEL MKX Series Modified Hydroxyethyl Methyl Cellulose
- WALOCEL MTX 35000 PF 01 Hydroxyethyl Methyl Cellulose
- WALOCEL MTX 80000 PF 01 Hydroxyethyl Methyl Cellulose

Product Overview
- WALOCEL™ hydroxyethyl methyl cellulose products are white to off-white, high-purity, water-soluble polymers with no odor. They are available as powder or granules.¹ For further details, see Product Description.
- WALOCEL hydroxyethyl methyl cellulose products are used in a wide range of industrial and construction applications as thickeners, bonding and adhesion agents, coatings, and additives.² For further details, see Product Uses.
- Although consumers may use products that contain WALOCEL hydroxyethyl methyl cellulose products, workers in facilities that manufacture or formulate products using these materials are most likely to have direct exposure. For further details, see Exposure Potential.
- Dust from WALOCEL products may cause mechanical irritation to the skin and eyes under extreme conditions and may be considered a nuisance dust if inhaled. However, WALOCEL hydroxyethyl methylcellulose products are not considered to present any significant health hazards under normal handling conditions.³,⁴ For further details, see Health Information and the relevant Safety Data Sheet.
- WALOCEL hydroxyethyl methyl cellulose products are not readily biodegradable, but do biodegrade slowly under environmental conditions, including removal by biological wastewater-treatment facilities. No bioconcentration is expected because of the relatively high molecular weight and water solubility. These products are not expected to be toxic to aquatic organisms.⁵ For further details, see Environmental Information.

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The Dow Chemical Company
Product Safety Assessment: WALOCEL™ Hydroxyethyl Methyl Cellulose

- WALOCEL™ hydroxyethyl methyl cellulose products are stable under recommended storage and normal use conditions, but may form an explosive dust-air mixture. These products may pose a slipping hazard. Avoid temperatures above 130°C (266°F). For further details, see Physical Hazard Information.

Manufacture of Product
- **Locations** – WALOCEL™ hydroxyethyl methyl cellulose products are manufactured by global affiliates of The Dow Chemical Company at facilities in Germany.
- **Process** – To produce hydroxyethyl methyl cellulose products, cellulose fibers, mostly from wood pulp, are heated in a caustic solution and then treated with methyl chloride and ethylene oxide, yielding the methyl ether of cellulose. The fibrous reaction product is filtered, dried, and ground into a fine, uniform powder.

Product Description
WALOCEL™ hydroxyethyl methyl cellulose products are water-soluble, high-purity, white to off-white products marketed as powder or granules by Dow Construction Chemicals, a business unit of The Dow Chemical Company. WALOCEL hydroxyethyl methyl cellulose products are available in a wide variety of viscosity grades to meet many different application needs.

Product Uses
WALOCEL™ hydroxyethyl methyl cellulose products include an extensive family of high-performance cellulosic products used for a wide range of industrial and construction applications:
- Cement-based tile adhesives
- Tile grouts
- Self-leveling underlayments
- Mortars for EIFS (Exterior Insulation and Finishing System)/skim coat
- Cement-based plasters
- Gypsum-based building materials
- Cement and cement-giver extruded materials
- Ready-to-use latex systems
- Ceramic pastes

Exposure Potential
WALOCEL™ hydroxyethyl methyl cellulose products are used in the production of industrial and consumer products. Based on the uses for these products, the public could be exposed through:
- **Workplace exposure** – Exposure can occur either in a facility that manufactures WALOCEL hydroxyethyl methyl cellulose products or in the various industrial or manufacturing facilities that use these products. Those working with these products in manufacturing operations could be exposed during maintenance, sampling, testing, or other procedures. Each manufacturing facility should have a thorough training program for employees and appropriate work processes and safety equipment in place to limit exposure. See Health Information.
- **Consumer exposure to products containing WALOCEL hydroxyethyl methyl cellulose** – Dow does not sell WALOCEL hydroxyethyl methyl cellulose products for direct consumer use, but they are used to make adhesives, grout, sealants, underlayment, and other products for the construction industry. Long-term studies of similar modified cellulosics have shown these types of products to be safe for use in a wide variety of applications. See Health Information.
- **Environmental releases** – In the event of a spill, the focus is on containing the spill to prevent contamination of soil, surface water, or groundwater. These products are non-volatile, water-soluble polymers. They are not readily biodegradable, but will biodegrade slowly under environmental conditions, including removal by biological wastewater-treatment facilities. No bioconcentration is expected because of the relatively high molecular weight and water solubility. These products are considered practically non-toxic to aquatic organisms on an acute basis. See Environmental, Health, and Physical Hazard Information.

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Large release – Industrial spills or releases are infrequent and generally contained. If a large spill does occur, the product should be captured, collected, and reprocessed or disposed of according to applicable governmental requirements. Contain spilled material if possible. Sweep up spills, but use care to minimize generation of airborne dust. Collect in suitable and properly labeled containers. Do not use water for cleanup. Material becomes slippery when wet. Use appropriate safety equipment. Prevent from entering into soil, ditches, sewers, waterways, and/or groundwater. See Environmental, Health, and Physical Hazard Information.

In case of fire – 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. Use water, dry-chemical, or carbon-dioxide extinguishers to fight the fire. Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance. 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 charge. 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 and carbon dioxide. Follow emergency procedures outlined in the Safety Data Sheet carefully. See Environmental, Health, and Physical Hazard Information.

For more information, see the relevant Safety Data Sheet.

Health Information
Health information for WALOCEL™ hydroxyethyl methyl cellulose-containing products is summarized on the relevant Safety Data Sheets. These materials may also contain minor components or additives that have additional health risks. It is important to note that health risks associated with individual products may vary based on their formulation or intended use. The Safety Data Sheet is the preferred source for specific health information. An overview of health information for these products appears below.

Eye contact – Contact with solid or dust may cause irritation or corneal injury due to mechanical action.

Skin contact – These products are essentially non-irritating to the skin.

Inhalation – No adverse effects are anticipated from a single exposure to dust.

Ingestion – These products have very low toxicity if swallowed. Harmful effects are not anticipated from swallowing small amounts.

For more information, see the relevant Safety Data Sheet.

Environmental Information
WALOCEL™ hydroxyethyl methyl cellulose products are water-soluble polymers with very low volatility. If released to water, they would tend to remain there. Based on stringent Organisation for Economic Co-Operation and Development (OECD) test guidelines, WALOCEL hydroxyethyl methyl cellulose products cannot be considered to be readily biodegradable. However, these products are expected to biodegrade slowly under environmental conditions, including removal by biological wastewater-treatment facilities.

WALOCEL hydroxyethyl methyl cellulose products would not be expected to bioconcentrate (accumulate in the food chain) because of their relatively high molecular weight and water solubility. Based on data for similar products, WALOCEL hydroxyethyl methyl cellulose products are not expected to be toxic (LC50/EC50/IC50 above 100 mg/L in the most sensitive species tested) to aquatic organisms on an acute basis.

For more information, see the relevant Safety Data Sheet.
Physical Hazard Information

WALOCEL™ hydroxyethyl methyl cellulose products are stable under recommended storage and normal use conditions. Exposure to elevated temperatures can cause these products to decompose. Avoid temperatures above 130°C (266°F). Avoid contact with oxidizing materials, strong acids, and strong bases.

These products can form explosive dust/air mixtures. Minimize potential sources of ignition (such as static discharge) as well as operations that could disperse dust in the air.

For more information, see the relevant Safety Data Sheet.

Regulatory Information

Regulations may exist that govern the manufacture, sale, transportation, use, and/or disposal of WALOCEL™ hydroxyethyl methyl cellulose products. These regulations may vary by city, state, country, or geographic region. Information may be found by consulting the relevant Safety Data Sheet, Technical Data Sheet, or Contact Us.

Additional Information

- Safety Data Sheet (www.dow.com/webapps/msds/msdssearch.aspx)
- Contact Us (www.dowconstructionchemicals.com/na/en/contact/)

For more business information about WALOCEL™ hydroxyethyl methyl cellulose products, visit the Dow Construction Chemicals website at www.dowconstructionchemicals.com.
References


Back to top
NOTICES

As part of its 2015 Sustainability Goals, Dow has committed to make publicly available safety assessments for its products globally. This product safety assessment is intended to give general information about the chemical (or categories of chemicals) addressed. It is not intended to provide an in-depth discussion of health and safety information. Additional information is available through the relevant Safety Data Sheet, which should be consulted before use of the chemical. This product safety assessment does not replace required communication documents such as the Safety Data Sheet.

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