



Safety Data Sheet

The Dow Chemical Company

Product Name: METHOCEL* K100 Premium LVCR Hydroxypropyl Methylcellulose

Revision Date: 2011/03/08

Print Date: 09 Mar 2011

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.

Section 1. Identification of the substance/preparation and of the company/undertaking

1.1 Product identifiers

Product Name

METHOCEL* K100 Premium LVCR Hydroxypropyl Methylcellulose

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Thickener. Binder. Film former. Processing aid.

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

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

Customer Information Number:

800-258-2436
SDSQuestion@dow.com

1.4 EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact:

989-636-4400

Local Emergency Contact:

00 31 115 69 4982

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification - REGULATION (EC) No 1272/2008

This product is not classified as dangerous according to EC criteria.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

®(TM)*Trademark

This product is not classified as dangerous according to EC criteria.

2.2 Label elements

Labelling - REGULATION (EC) No 1272/2008

This product is not classified as dangerous according to EC criteria.

2.3 Other Hazards

No information available.

Section 3. Composition/information on ingredients

3.1 Substance

This product is a substance.

| CAS-No. / EC-No. / REACH No. Index | Amount | Component | Classification: REGULATION (EC) No 1272/2008 |
|---|---------------|------------------|---|
|---|---------------|------------------|---|

| | | | |
|---|---|--------------------------------|----------------|
| CAS-No. 9004-65-3 EC-No. Polymer | — | 100.0 % Modified cellulose# | Not classified |
|---|---|--------------------------------|----------------|

| CAS-No. / EC-No. / Index | Amount | Component | Classification: 67/548/EEC |
|---------------------------------|---------------|------------------|-----------------------------------|
|---------------------------------|---------------|------------------|-----------------------------------|

| | | | |
|---|---------|---------------------|-----------------|
| CAS-No. 9004-65-3 EC-No. Polymer | 100.0 % | Modified cellulose# | Not classified. |
|---|---------|---------------------|-----------------|

Substance(s) with an Occupational Exposure Limit.
For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4. First-aid measures

4.1 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; if effects occur, consult a physician.

Skin Contact: Wash skin with plenty of water.

Eye Contact: Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary.

4.2 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), no additional symptoms and effects are anticipated.

4.3 Indication of immediate medical attention and special treatment needed

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

Section 5. Fire Fighting Measures

5.1 Extinguishing Media

Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.

5.2 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.

5.3 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.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures: Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

6.3 Methods and materials for containment and cleaning up: Contain spilled material if possible. 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.

Section 7. Handling and Storage

7.1 Precautions for safe handling

Handling

General Handling: Keep away from heat, sparks and flame. No smoking, open flames or sources of ignition in handling and storage area. Electrically ground and bond all equipment. Good

housekeeping and controlling of dusts are necessary for safe handling of product. 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. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Store in a dry place. See Section 10 for more specific information.

Storage temperature: 5 - 35 °C

7.3 Specific end uses

See the technical data sheet on this product for further information.

Section 8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure Limits

| Component | List | Type | Value |
|--------------------|---------|----------------|----------------------|
| Modified cellulose | Dow IHG | TWA Total dust | 10 mg/m ³ |

8.2 Exposure controls

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.

Skin Protection: No precautions other than clean body-covering clothing should be needed.

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.

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, in dusty atmospheres, use an approved particulate respirator. Use the following CE approved air-purifying respirator: Particulate filter, type P2.

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.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

| | |
|---|--|
| Appearance | |
| Physical State | Powder |
| Color | White to off-white |
| Odor | Odorless |
| Odor Threshold | No test data available |
| pH | Not applicable |
| Melting Point | No test data available |
| Freezing Point | Not applicable |
| Boiling Point (760 mmHg) | Not applicable. |
| Flash Point - Closed Cup | No test data available |
| Evaporation Rate (Butyl Acetate = 1) | Not applicable to solids |
| Flammability (solid, gas) | No |
| Flammable Limits In Air | Lower: No test data available Upper: No test data available |
| Vapor Pressure | Not applicable |
| Vapor Density (air = 1) | Not applicable |
| Specific Gravity (H₂O = 1) | No test data available |
| Solubility in water (by weight) | completely soluble in water |
| Partition coefficient, n-octanol/water (log Pow) | No data available for this product. |
| Autoignition Temperature | No test data available |
| Decomposition Temperature | No test data available |
| Kinematic Viscosity | Not applicable |
| Explosive properties | no data available |
| Oxidizing properties | no data available |

9.2 Other information

Section 10. Stability and Reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under recommended storage conditions. See Storage, Section 7.

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to Avoid: Avoid temperatures above 130 °C. Exposure to elevated temperatures can cause product to decompose. Avoid static discharge.

10.5 Incompatible Materials: Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases.

10.6 Hazardous decomposition products

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

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity

Ingestion

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
For similar material(s): LD50, Rat > 10,000 mg/kg

Aspiration hazard

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

Dermal

No adverse effects anticipated by skin absorption.
The dermal LD50 has not been determined.

Inhalation

No adverse effects are anticipated from single exposure to dust. For respiratory irritation and narcotic effects: No relevant data found.
As product: The LC50 has not been determined.

Eye damage/eye irritation

Solid or dust may cause irritation or corneal injury due to mechanical action.

Skin corrosion/irritation

Essentially nonirritating to skin.

Sensitization

Skin

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

Respiratory

No relevant data found.

Repeated Dose Toxicity

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

Chronic Toxicity and Carcinogenicity

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

Developmental Toxicity

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

Reproductive Toxicity

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

Genetic Toxicology

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

Component Toxicology - Modified cellulose

| | |
|------------------------|---------------------------------------|
| Skin Absorption | Estimated. LD50, Rabbit > 5,000 mg/kg |
|------------------------|---------------------------------------|

Section 12. Ecological Information

12.1 Toxicity

Not expected to be acutely toxic to aquatic organisms.

12.2 Persistence and Degradability

No appreciable biodegradation is expected.

Biological oxygen demand (BOD):

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|--------------|---------------|---------------|---------------|
| | | 0 % | |

12.3 Bioaccumulative potential

Bioaccumulation: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

12.4 Mobility in soil

Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Other adverse effects

No specific, relevant data available for assessment.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Any disposal practice must be in compliance with all local and national laws and regulations. Do not dump into any sewers, on the ground, or into any body of water.

Section 14. Transport Information

ROAD & RAIL

NOT REGULATED

OCEAN

NOT REGULATED

AIR

NOT REGULATED

INLAND WATERWAYS

NOT REGULATED

Section 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

European Inventory of Existing Commercial Chemical Substances (EINECS)

This product is a polymer according to the definition in Directive 92/32/EEC (7th Amendment to Directive 67/548/EEC) and all of its starting materials and intentional additives are listed in the European Inventory of Existing Commercial Chemical Substances (EINECS) or in compliance with European (EU) chemical inventory requirements.

15.2 Chemical Safety Assessment

Not applicable.

Section 16. Other Information

Hazard statement in the composition section

Product Literature

Additional information on this and other products we offer may be obtained by contacting us. Ask for a product information brochure or data on how to access our website.

Revision

Identification Number: 79461 / 1001 / Issue Date 2011/03/08 / Version: 4.0

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

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