	Page: 1
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date: 03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Trade name : benecel™ k100m hydroxypropyl methylcellulose
Description : hydroxypropyl methylcellulose
™ Trademark, Ashland or its subsidiaries, registered in
various countries

Substance name METHYLHYDROXYPROPYLCELLULOSE

Substance No.
CAS-No. 9004-65-3

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

Recommended use : Rheology modifier

Details of the supplier of the safety data sheet Ashland P.O. Box 2219 Columbus, OH 43216 United States of America (USA) 1-614-790-3333 (USA) EHSPProductSafety@ashland.com	Emergency telephone 1-800-ASHLAND (1-800-274-5263) Regulatory information 1-614-790-3333 (customer service) Product Information 1-614-790-3333 (USA)
--	--

SECTION 2. HAZARDS IDENTIFICATION


GHS Classification

Combustible Dust :

GHS label elements

Signal Word : Warning

Hazard Statements : May form combustible dust concentrations in air.

	Page: 2
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date: 03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

Other hazards

May form explosible dust-air mixture if dispersed.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
Chemical nature : organic

Hazardous ingredients


No hazardous ingredients

SECTION 4. FIRST AID MEASURES

General advice : Do not leave the victim unattended.
If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
In case of skin contact : Wash off with soap and plenty of water.
In case of eye contact : Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.
If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards during fire fighting : No information available.
Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide
Specific extinguishing methods :
Standard procedure for chemical fires.
Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

	Page: 3
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date: 03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | |
|---|---|
| Personal precautions,
protective equipment and
emergency procedures | : Use personal protective equipment.
Avoid dust formation. |
| Environmental precautions | : Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform
respective authorities. |
| Methods and materials for
containment and cleaning up | : Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal. |

SECTION 7. HANDLING AND STORAGE

- | | |
|--|---|
| Advice on protection against
fire and explosion | : Provide appropriate exhaust ventilation at places where dust
is formed. |
| Advice on safe handling | : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the
application area. |
| Conditions for safe storage | : Electrical installations / working materials must comply with
the technological safety standards. |
| Materials to avoid | : No materials to be especially mentioned. |
| Further information on
storage stability | : Keep in a dry place. |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION


Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

- | | |
|-----------------------------|---|
| Engineering measures | : Provide sufficient mechanical (general and/or local exhaust)
ventilation to maintain exposure below exposure guidelines (if
applicable) or below levels that cause known, suspected or
apparent adverse effects. |
|-----------------------------|---|

Personal protective equipment


- | | |
|------------------------|--|
| Respiratory protection | : In the case of dust or aerosol formation use respirator with an
approved filter within the capabilities of the respirator/filter
combination.
Where concentrations are above recommended limits or are
unknown, or a cartridge type respirator is not adequate, wear |
|------------------------|--|

	Page: 4
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date: 03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

		a positive-pressure supplied-air respirator.	
Hand protection			
Material	:	butyl-rubber	
Break through time	:	480 min	
Glove thickness	:	> 0.5 mm	
Remarks	:	The exact break through time can be obtained from the protective glove producer and this has to be observed. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.	
Eye protection	:	Safety glasses	
Skin and body protection	:	Work uniform or laboratory coat.	
Hygiene measures	:	General industrial hygiene practice.	

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	granules, powder
Physical state	:	solid
Color	:	off-white
Odor	:	odorless
Odor Threshold	:	Not applicable
pH	:	5.0 - 8.0 Concentration: 2 % (as aqueous solution)
Melting point/freezing point	:	354 °F / 179 °C
Boiling point/boiling range	:	not determined
Flash point	:	not determined
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Combustible Dust
Upper explosion limit	:	not determined
Lower explosion limit	:	Lower explosion limit 30 g/m3
Vapor pressure	:	Not applicable
Relative vapor density	:	Not applicable
Relative density	:	No data available

	Page: 5
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date: 03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9


Density	: 0.3 - 0.35 g/cm ³
Bulk density	: 200 - 500 kg/m ³
Solubility(ies)	
Water solubility	: soluble, Limited by viscosity
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: not determined
Autoignition temperature	: 400 °C
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Oxidizing properties	: Not applicable
Molecular weight	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Dust may form explosive mixture in air.
Conditions to avoid	: Protect from frost, heat and sunlight.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	Carbon monoxide Carbon dioxide (CO ₂)

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: Inhalation Eye contact Skin contact Ingestion
Acute toxicity	

	Page: 6
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date:03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: Slight, transient irritation

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP


No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Fish): > 100 mg/l

	Page: 7
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date: 03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Persistence and degradability

Product:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 7 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Result: Not readily biodegradable.
Biodegradation: 10 %
Exposure time: 60 d
Method: OECD Test Guideline 301D

Biochemical Oxygen Demand (BOD) : Biochemical oxygen demand within 5 days
> 0 - 100 mg/g

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods


Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

	Page: 8
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date:03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

CFR_RAIL_C

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

MX_DG

Not dangerous goods

TDG_INWT_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS


Not dangerous goods

U.S. DOT - ROAD

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant	no
------------------	----

	Page: 9
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date: 03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Combustible Dust

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know


HYDROXYPROPYL METHYLCELLULOSE 9004-65-3

New Jersey Right To Know

HYDROXYPROPYL METHYLCELLULOSE 9004-65-3

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

	Page: 10
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date: 03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

The ingredients of this product are reported in the following inventories:

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
AIIC	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

Inventories


AIIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TECI (Thailand), TSCA (USA)

Other regulations

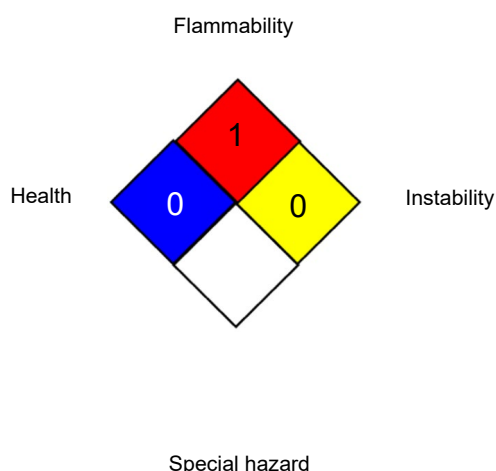
US. Drug Enforcement Administration (DEA) Listed Precursor and Essential Chemicals (21 CFR 1310)	Not applicable
--	----------------

SECTION 16. OTHER INFORMATION

Further information

	Page: 11
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date: 03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

NFPA 704:



HMIS® IV:


HEALTH	/	0
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of H-Statements

Full text of other abbreviations

AIIC - 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 -

	Page: 12
SAFETY DATA SHEET	Revision Date: 03/29/2023
	Print Date:03/31/2023
	SDS Number: R0703590
benecel™ k100m hydroxypropyl methylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 821964	Version: 1.9

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; 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

This sds has been prepared by Ashland. (<http://www.ashland.com>)

Sources of key data used to compile the Material Safety Data Sheet : Ashland internal data including own and sponsored test reports
European Union Law with content from the Official Journal of the European Union.
European Chemicals Agency; the EU authority implementing the EU's chemicals legislation for companies.
The German Water Hazard Classes.
ReachCentrum; a series of support services to help comply with REACH regulations.
The European Commission; proposing legislation, administering and implementing EU policies, and enforcing EU law.
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.
Cefic, the European Chemical Industry Council.
ESIS European Chemical Substances Information System

Revision Date : 03/29/2023

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
US / EN