

SAFETY DATA SHEET
Avicel® PC 591 Microcrystalline Cellulose

SDS # : 160183-B
Revision date: 2019-05-01
Format: NA
Version 4.100002



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Avicel® PC 591 Microcrystalline Cellulose

Other means of identification

Product Code(s) 160183-B

Synonyms Microcrystalline cellulose (INCI Name): MCC, cellulose gel, Sodium Carboxymethylcellulose: NaCMC, CMC, SCMC, Carboxymethyl ether, Sodium CMC, Sodium salt, Cellulose gum

Recommended use of the chemical and restrictions on use

Recommended Use: Personal care***

Restrictions on Use: See section 16 for more information

Supplier Address

DuPont Nutrition USA, Inc.
974 Centre Road
Wilmington, DE 19805
+ 1 800 255 6837 (General Information)
sds.enablers@dupont.com (E-Mail General Information)

Emergency telephone number

For leak, fire, spill, or accident emergencies, call:
(800) 424-9300 (CHEMTREC - U.S.A. & Canada)
(703) 527-3887 (CHEMTREC - all other countries)

(207) 594-3200 (DuPont Plant - Rockland, ME)
(303) 595-9048 (Medical - U.S. - Call Collect)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Label elements, including precautionary statements**EMERGENCY OVERVIEW****Warning****Physical Hazards**

May form combustible dust concentrations in air

Hazards not otherwise classified (HNOC)

Aspiration or inhalation of this product could cause chemical pneumonitis. Excessive inhalation of dust can mechanically impede respiration. Due to the hygroscopic properties of the gums, they can form a paste or gel in the airway.

Other Information

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No	Weight %
Microcrystalline cellulose	9004-34-6	-
Sodium carboxymethylcellulose	9004-32-4	-

* The exact percentage composition has been withheld as a trade secret.

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

General Advice	When symptoms persist or in all cases of doubt seek medical advice.***
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if eye irritation develops or persists.
Skin Contact	Wash with water and soap as a precaution.
Inhalation	Remove person to fresh air. If breathing is difficult or if discomfort occurs and persists, obtain medical attention.
Ingestion	Never give anything by mouth to an unconscious person. Drink plenty of water. Get medical attention if symptoms occur.
Most important symptoms and effects, both acute and delayed	Difficulty breathing. Cough.
Indication of immediate medical attention and special treatment needed, if necessary	Aspiration or inhalation of this product could cause chemical pneumonitis. Treatment is symptomatic and supportive.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	None known.

Specific Hazards Arising from the Chemical	Avoid dust formation Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Explosion data	
Sensitivity to Mechanical Impact	Not sensitive.
Sensitivity to Static Discharge	Static electricity might be sufficient to ignite dust clouds. Possibility of ignition will depend on the minimum ignition energy (MIE) and the type of operations undertaken with the material. MIE values are not provided in this SDS.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid dispersal of dust in the air (i.e., cleaning dust surfaces with compressed air.). Avoid breathing dust. Powder may become slippery when wet. For personal protection see section 8.
Other	For further clean-up instructions, call DuPont Emergency Hotline number listed in Section 1 "Product and Company Identification" above.***
Environmental Precautions	See Section 12 for additional Ecological Information.
Methods for Containment	Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.
Methods for cleaning up	Sweep, vacuum or shovel into suitable containers for disposal. Nonsparking tools should be used. Washdown water is not recommended. Powder may become slippery when wet.

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powdered material can build static electricity when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmosphere. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment if release of airborne dust is expected.
Storage	Store at less than 25 °C, in tightly closed containers. Keep out of direct sunlight. Store in dry environment away from heat and sources of ignition, i.e., steam pipes, radiant heaters, hot air vents or welding sparks. Do not store with strong smelling materials.
Incompatible products	Oxidizing agents. Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Microcrystalline cellulose (9004-34-6)	TWA: 10 mg/m ³ ***	TWA: 15 mg/m ³ TWA: 5 mg/m ³ ***	TWA: 10 mg/m ³ TWA: 5 mg/m ³ ***	Mexico: TWA 10 mg/m ³ ***
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Microcrystalline cellulose (9004-34-6)	TWA: 10 mg/m ³ TWA: 3 mg/m ³ ***	TWA: 10 mg/m ³ ***	TWA: 10 mg/m ³ ***	TWA: 10 mg/m ³ TWA: 5 mg/m ³ ***

Appropriate engineering controls

Engineering measures	It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in the handling of this product contain explosion relief vents or an explosion suppression or an oxygen-deficient environment. Use only
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appropriately classified electrical equipment and powered industrial trucks.

Individual protection measures, such as personal protective equipment

Eye/Face Protection	Safety glasses.
Skin and Body Protection	Minimize skin contamination by following good industrial hygiene practices. Use gloves if extended exposure is anticipated.
Hand Protection	Protective gloves
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.
General information	Protective engineering solutions should be implemented and in use. These recommendations apply to the product as supplied. If the product is used in mixtures, contact an appropriate protective equipment supplier or industrial hygienist for more information.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Free flowing powder Dry powder
Physical State	Solid
Color	Off-white
Odor	Odorless
Odor threshold	No information available
pH	6 - 8 (2% aqueous dispersion)
Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	Not applicable
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	0.6 g/cm ³
Specific gravity	No information available
Water solubility	Dispersible in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Molecular weight	No information available
Bulk density	No information available
K_{st}	>0 bar m/s

10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical Stability	Stable under recommended storage conditions.

Possibility of Hazardous Reactions None under normal processing.
Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Dust formation. Excessive heat. Humid air. Sparks.
Incompatible materials Oxidizing agents. Strong acids.

Hazardous Decomposition Products Hazardous decomposition products formed under fire conditions: Carbon monoxide (CO) and Carbon dioxide (CO₂).***

11. TOXICOLOGICAL INFORMATION

Product Information

Sensitization Not expected to be sensitizing based on the components.

Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Microcrystalline cellulose (9004-34-6)	> 5 g/kg (Rat)***	> 2 g/kg (Rabbit) > 2000 mg/kg (Rabbit)***	> 5800 mg/m ³ (Rat) 4 h***
Sodium carboxymethylcellulose (9004-32-4)	= 27000 mg/kg (Rat)***	>2 g/kg (Rabbit)	>5800 mg/m ³ (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity Product does not present a chronic toxicity hazard based on known or supplied information.
Mutagenicity No known mutagenic or teratogenic effects.
Carcinogenicity Contains no ingredient listed as a carcinogen
Reproductive toxicity This product does not contain any known or suspected reproductive hazards.
STOT - single exposure None known.
STOT - repeated exposure None noted in chronic animal studies.
Aspiration hazard Aspiration may cause chemical pneumonitis. Excessive inhalation of dust can mechanically impede respiration.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Persistence and degradability Expected to biodegrade, based on component information.

Bioaccumulation Bioaccumulation is unlikely.

Mobility No information available.

Other Adverse Effects None known.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT NOT REGULATED
TDG NOT REGULATED

15. REGULATORY INFORMATION**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Microcrystalline cellulose 9004-34-6	X***	X***	X***

International Inventories

A food, food additive, drug, cosmetic, or device, when manufactured, processed or distributed in commerce for use as a food, food additive, drug, cosmetic, or device is not subject to the notification requirements of 40 CFR 720.

Chemical name	TSCA	DSL	EINECS/ELINC	ENCS	China	KECL (Korea)	PICCS	AICS

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	(United States)	(Canada)	S (Europe)	(Japan)	(IECSC)		(Philippines)	(Australia)
Microcrystalline cellulose 9004-34-6	X***	X***	X***	X***	X***	X***	X***	X***
Sodium carboxymethylcellulose 9004-32-4	X***	X***		X***	X***	X***	X***	X***

Mexico - Grade Slight risk, Grade 1

Chemical name	Carcinogen Status	Mexico
Microcrystalline cellulose		Mexico: TWA 10 mg/m ³ ***

WHMIS Statement

This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

WHMIS Hazard Class See section 2 for more information

16. OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 1	Instability 0	Special Hazards -
HMIS	Health Hazards 1	Flammability 1	Physical hazard 0	Personal Protection X

*Indicates a chronic health hazard.

Revision date: 2019-05-01
Reason for revision: *** Indicates updated section***

Disclaimer

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling. DuPont Nutrition USA, Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. **NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN.** The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of DuPont Nutrition USA, Inc., DuPont Nutrition USA, Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.***

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Product Suitability

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End of Safety Data Sheet