

MATERIAL SAFETY DATA SHEET

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Version 1.1

Section 1 - Product and Company Information

Product Name Carboxymethylcellulose sodium salt,
medium viscosity, meets USP testing
specifications

Product Number C9481

Brand SIAL

Company Sigma-Aldrich

Address 3050 Spruce Street
SAINT LOUIS MO 63103 US

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Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
CARBOXYMETHYL CELLULOSE, SODIUM SALT, MEETS USP TESTING SPECS.	9004-32-4	No

Formula C28H30Na8O27

Synonyms AC-Di-sol. NF * Aku-W 515 * Aquaplast * B 10 * B
10 (Polysaccharide) * Blanose BS 190 * Blanose
BWM * Carbose 1M * Carboxymethylcellulose, sodium
salt * Carmethose * Cellofas * Cellofas B *
Cellofas B5 * Cellofas B6 * Cellofas B50 *
Cellofas C * Cellogel C * Cellogen 3H * Cellogen
PR * Cellogen WS-C * Cellpro * Cellufix FF 100 *
Cellugel * Cellulose glycolic acid, sodium salt *
Cellulose sodium glycolate * CMC 2 * CMC 41A *
CM-Cellulose sodium salt * CMC 7H * CMC 4H1 * CMC
7H3SF * CMC 7L1 * CMC 7M * CMC 4M6 * CMC 7MT *
CMC 3M5T * CMC sodium salt * Collowel * Copagel
PB 25 * Courlose A 590 * Courlose A 610 *
Courlose A 650 * Courlose F 4 * Courlose F 8 *
Courlose F 20 * Courlose F 370 * Courlose F 1000G
* Daicel 1150 * Daicel 1180 * Edifas B * Ethoxose
* Fine Gum HES * Glikocel TA * 7H3SF * KMTs 212 *
KMTs 300 * KMTs 500 * KMTs 600 * Lovosa * Lovosa
20alk. * Lovosa TN * Lucel (polysaccharide) *
Majol PLX * Modocoll 1200 * NaCm-cellulose salt *
Nymcel S * Nymcel slc-T * Nymcel ZSB 10 * Nymcel
ZSB 16 * Polyfibron 120 * Sanlose SN 20A *
Sarcell tel * S 75M * Sodium
carboxmethylcellulose * Sodium carboxymethyl
cellulose * Sodium cellulose glycolate * Sodium
CMC * Sodium CM-cellulose * Sodium glycolate
cellulose * Sodium salt of carboxymethylcellulose
* Tylose 666 * Tylose C * Tylose C 30 * Tylose C
300 * Tylose C 600 * Tylose CB 200 * Tylose CBR
400 * Tylose CBR series * Tylose CBS 30 * Tylose
CBS 70 * Tylose CB series * Tylose C 1000P *

Section 3 - Hazards Identification

HMIS RATING

HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING

HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

EXPLOSION HAZARDS

May form explosive mixtures with air

EXPLOSION DATA

Dust Potential: This material, like most materials in powder form, is capable of creating a dust explosion.

CONDITIONS OF FLAMMABILITY

Static charges generated by emptying package in or near flammable vapors may cause flash fire.

FLASH POINT

N/A

AUTOIGNITION TEMP

370 °C

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Hand: Protective gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Color: Faintly beige Form: Powder	
Property	Value	At Temperature or Pressure
Molecular Weight	N/A	
pH	6.5 - 8.0	
BP/BP Range	N/A	
MP/MP Range	300 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	1.59 g/cm ³	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A > 1 %	20 °C

VOC Content	N/A
Water Content	< 8 %
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	500.0 - 2,500.0 Pas
Surface Tension	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	370 °C
Refractive Index	N/A
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Oral

Rat

27000 mg/kg

LD50

Inhalation

Rat

> 5,800 mg/m³

LC50

Oral

Mouse

> 27000 mg/kg

LD50

Oral
Rabbit
> 27000 mg/kg
LD50

Skin
Rabbit
> 2000 mg/kg
LD50

Oral
Guinea pig
16000 mg/kg
LD50

CHRONIC EXPOSURE - CARCINOGEN

Species: Rat
Route of Application: Subcutaneous
Dose: 1900 MG/KG
Exposure Time: 19W
Frequency: I
Result: Tumorigenic:Tumors at site or application.
Tumorigenic:Neoplastic by RTECS criteria.

Species: Rat
Route of Application: Subcutaneous
Dose: 8600 MG/KG
Exposure Time: 19W
Frequency: I
Result: Tumorigenic:Neoplastic by RTECS criteria.
Tumorigenic:Tumors at site or application.

Species: Rat
Route of Application: Subcutaneous
Dose: 33 GM/KG
Exposure Time: 22W
Frequency: I
Result: Tumorigenic:Neoplastic by RTECS criteria.
Tumorigenic:Tumors at site or application.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 140 MG/KG
Route of Application: Oral
Exposure Time: (14D MALE)
Result: Paternal Effects: Prostate, seminal vessicle, Cowper's gland, accessory glands.

Section 12 - Ecological Information

No data available.

ACUTE ECOTOXICITY TESTS

Test Type: LC50 Fish
Species: Onchorhynchus mykiss (Rainbow trout) Lepomis macrochirus (Bluegill)
Time: 96 h
Value: 100.0 - 1,000.0 mg/l

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D or manufacturing use. Not for prescription compound or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.