

CNCD

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015.

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SECTION 1: Identification

1.1. Product identifier

Product name : CNCD
Product code : Not Available

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

Use of the substance/mixture : Cellulose Nanocrystal Powder Certified Reference Material, for laboratory use only

1.3. Details of the supplier of the safety data sheet

National Research Council Canada
1200 Montreal Road
Ottawa, K1A 0R6 - Canada
T 613-993-2359



National Research
Council Canada

Conseil national de
recherches Canada

1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Combustible Dust

2.2. Label elements

GHS labelling

Signal word (GHS) : Warning
Hazard statements (GHS) : May form combustible dust concentrations in air.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Cellulose	(CAS No) 9004-34-6	100

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.
First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

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First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory tract irritation.
Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Powder, water spray, foam, carbon dioxide.
Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible dust. Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Avoid generating dust. Dust may form flammable mixture with air.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate sources of ignition. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. 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. Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air).

6.2. Methods and material for containment and cleaning up

For containment : Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for cleaning up : Vacuum or sweep material and place in a disposal container. Provide ventilation. Use only non-sparking tools.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from sources of ignition. Avoid contact with skin and eyes. Do not swallow. Avoid generating and breathing dust. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc., is not recommended. Use only in well-ventilated areas. Handle and open container with care. Use non-sparking tools. Do not eat, drink or smoke when using this product.
- Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep out of the reach of children. Store in sealed containers at 4 °C / 39.2 °F. Bottle contents should be well mixed by rotation and shaking prior to use, and tightly closed immediately after use. Once opened, the material should be placed in a desiccator until reused. Suspensions prepared by sonication may be stored at 4 °C / 39.2 °F for up to 4 weeks and should not be frozen.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cellulose (9004-34-6)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
IDLH	Not applicable	
NIOSH	NIOSH REL (TWA) (mg/m ³)	10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)

8.2. Exposure controls

- Appropriate engineering controls : It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
- Hand protection : Wear suitable gloves.
- Eye protection : Safety glasses or goggles are recommended when using product.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear appropriate approved dust mask or filtering facepiece if dust is generated.
- Environmental exposure controls : Maintain levels below Community environmental protection thresholds.
- Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Powder
- Colour : White
- Odour : Odourless

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Odour threshold	:	No data available
pH	:	4-5 (3 wt% suspension)
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Combustible Dust
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Relative vapour density at 20 °C	:	No data available
Solubility	:	Insoluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

Minimum ignition temperature	:	410 °C / 770 °F (dust cloud)
Minimum explosible concentration	:	0.045 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Combustible dust – avoid generating dust. Dust may form flammable mixture with air.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Sources of ignition. Heat. Incompatible materials.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified.
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LD50 oral rat	> 2000 mg/kg
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LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 5 mg/l/4h
Cellulose (9004-34-6)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat	> 5800 mg/m ³ /4h

Skin corrosion/irritation	: Based on available data, the classification criteria are not met.
Serious eye damage/irritation	: Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.
Reproductive toxicity	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact	: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/injuries after ingestion	: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No additional information available.

12.2. Persistence and degradability

CNCD	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

CNCD	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

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SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT and TDG

Not regulated for transport

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2. US State regulations

No additional information available

SECTION 16: Other information

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Prepared by : Nexreg Compliance Inc.

DISCLAIMER:

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