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Material Safety Data Sheet
Microcrystalline Cellulose

Section 1 - Product Identification

Synonyms	:	Cellulose microcrystalline
Chemical Formula	:	$(C_6H_{10}O_5)_n$.
Company Identification	:	Tradeasia International Pte. Limited
Address	:	133 Cecil Street # 12-03 Keck Seng Tower, Singapore Tel: +65-6227 6365 Fax: +65-6225 6286 Email: contact@chemtradeasia.com
Recommended use	:	Analytical and preparative chromatography

Section 2 – Hazards Identification

2.1 Classification
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.2 Label elements
Not a hazardous substance or mixture.
Signal Word Warning
Hazard Statements
May form combustible dust concentrations in air
Precautionary Statements
Storage
Store in a well-ventilated place. Keep container tightly closed.

Section 3 – Composition/Information on Ingredients

3.1 Composition comments
Formula : $(C_6H_{10}O_5)_n$.
CAS-No. : 9004-34-6

Chemical Name	EC No/CAS No	Purity, %
Cellulose	9004-34-6	max. 99.9

Section 4 – First-Aid Measures

4.1. Description of first aid measures
General Advice If symptoms persist, call a physician.
Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.
Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

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

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

Section 5 – Fire Fighting Measures

5.1. Suitable Extinguishing media
Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

5.2. Specific hazards arising from the chemical
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3. Special protective actions for fire-fighters
In the event of fire, wear self-contained breathing apparatus.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions. Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Section 7 – Handling and Storage

7.1. Precautions for safe Handling
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

7.2. Conditions for safe storage, including any incompatibilities
Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed.

Section 8 – Exposure Controls/Personal Protection

8.1. Appropriate engineering controls
Change contaminated clothing. Wash hands after working with substance.

8.2. Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Do not let product enter drains.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State Powder Solid
Appearance White
Odor Odorless
Odor Threshold No information available
pH 5-7.5 100 g/L aq.sol
Vapor Density Not applicable
Solubility insoluble
Autoignition Temperature 500 °C / 932 °F
Decomposition Temperature 200 °C
Viscosity Not applicable
Bulk density 70 - 400 kg/m3
Particle size < 100 µm - Particle size

Section 10 – Stability and Reactivity

10.1. Reactivity
N.A

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
N.A.

10.4. Conditions to avoid:

Avoid dust formation. Incompatible products. Excess heat.

10.5. Incompatible materials
Strong oxidizing agents.

10.6. Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO2).

Section 11 – Toxicological Information

11.1 Health effects associated with ingredients
Acute toxicity
Oral: No data available
Inhalation: No data available
Dermal: No data available
Skin corrosion/irritation
No data available
Serious eye damage/eye irritation
No data available
Respiratory or skin sensitization
No data available
Germ cell mutagenicity
No data available
Carcinogenicity
No data available
Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available

Section 12 – Ecological Information

12.1.Toxicity
N.A.

12.2. Bioaccumulative potential
N.A.

12.3. Mobility in soil
Insoluble in water

12.4. Other adverse effects
N.A.

Section 13 – Disposal Considerations

13.1. Disposal methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Section 14 – Transport Information

14.1 Transportation Information
DOT Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations
HSNO Approval Code: HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006.

Section 16 : Additional Information

16.1. List of abbreviation and acronyms used in this MSDS
SDS : Safety Data Sheets
Index N° : atomic number of the element most characteristic of the properties of the substance
CAS No : Chemical Abstracts Service number
EC No : EINECS Number : European Inventory of Existing Commercial Substances
Repr. Cat. 2 : Substance presumed human reproductive toxicant
Acute Oral Cat. 5 : Substance which is of relatively low acute oral toxicity.
GHS : Globally Harmonised System of Classification and Labelling
LD_{50} : Median Lethal Dose
LC_{50} : Lethal Concentration, 50%
N.A. : Not Applicable
OSHA : Occupational Safety & Health Administration
Cal OSHA : The State of California Division of Occupational Safety and Health (DOSH)
PEL : Permissible Exposure Limits
ACGIH : American Conference of Governmental Industrial Hygienists
TLV : Threshold Limit Value
Japanese MITI : Japanese Ministry of International Trade and Industry
EC_{50} : Half maximal effective concentration
UN : United Nations
U.S. EPA TSCA Inventory: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the autority of the Environmental Protection Agency
Canadian DSL: Canadian Domestic Substances List

16.2. List of relevant hazard statements and precautionary statements used in this MSDS
Hazard Statement
H361 d: Suspected of damaging the unborn child

H319: Causes serious eye irritation
H303: May be harmful if swallowed
Precautionary Statements
Prevention
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P264: Wash eyes thoroughly after handling.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response
P308 + P313: If exposed or concerned: get medical advice/attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
Storage
P405: Store locked up.
Disposal
P501: Dispose of contents/container to in accordance with local regulations.

16.3. References

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For general information on the toxicology of borates see ECETOC Technical Report No. 63 (1995); Patty's Industrial Hygiene and Toxicology, 4th Edition Vol. II, (1994) Chap. 42, 'Boron'.

16.4. Disclaimer of Liability

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