



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

α -Cellulose

sc-214443



The Power is Question

Material Safety Data Sheet

Hazard Alert Code
Key:

EXTREME

HIGH

MODERATE

LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

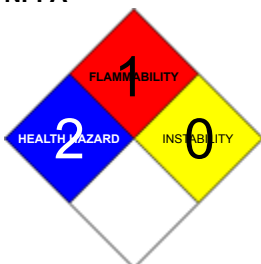
PRODUCT NAME

α -Cellulose

STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA



SUPPLIER

Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY

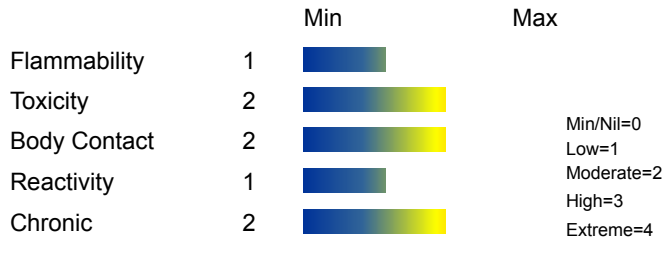
ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS

(C6-H10-O5)_n, "Food Additive 460", "cellulose powdered", Abicel, alpha-cellulose, alphacellulose, beta-amylose, "Arbocel BC200 B600/30", "Avicel 101 102 PH101 PH105", "Cellex MX", "cellulose crystalline 248 LA01", "microcrystalline cellulose", Celufi, "Cepo CFM S20 S40", "Chromedia CC31", "Chromedia CF11", Cupricellulose, "Elcema F 150", G250, P050, P100, "Fresenius D6", "Heweten 10", hydroxycellulose, "IMCD Dica flock Range and Hahn flock Range", "Kingcot MN-cellulose", Onozuka, P500, Pyrocellulose, Rayophane, "Rayweb Q", Rexel, Sigmacell, Solka-fil, Spartose, Solka-floc, "Solka-floc BW", "Solka-floc BW20 BW40 BW100 BW200 BW2030", "Sulfite Cellulose", Tomofan, Tunicin, "Whatman Ashless Floc", "Whatman CC-31", "Kraft paper OM-22", "Diacel 150", "Diacel 200", "Diacel 1000"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS



Min/Nil=0
 Low=1
 Moderate=2
 High=3
 Extreme=4



CANADIAN WHMIS SYMBOLS



EMERGENCY OVERVIEW

RISK

Irritating to respiratory system.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g.

■ Large doses of cellulose may be administered orally as non-nutritive bulk, with doses of up to 30 g/day tolerated as bulk laxative while extremely large oral doses may produce disturbances to the gut.

■ Polysaccharides are not easily absorbed from the digestive tract, but may produce a laxative effect. Larger doses may produce intestinal or stomach blockage.

EYE

■ Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn).

Slight abrasive damage may also result.

SKIN

■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models).

Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

■ Open cuts, abraded or irritated skin should not be exposed to this material.

■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.

Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

■ The material can cause respiratory irritation in some persons.

The body's response to such irritation can cause further lung damage.

■ Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.

■ Cellulose, given via the windpipe, caused fibrosis in the alveoli and airways, with injuries of the lung cells.

Some health effects associated with wood, cotton, flax, jute and hemp particles or fibres are not attributable to cellulose content but to other substances and/or impurities.

■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.

CHRONIC HEALTH EFFECTS

■ Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Inhalation studies using animals have shown that cellulose fibres can cause lung scarring, and humans exposed to cellulose at work are more likely to develop asthma and obstructive lung disease. The substance may also induce the production of free radicals in human white blood cells.

Cotton dust disease, "byssinosis", is well known among cotton mill workers. Cotton dust is mainly cellulose fibre.

Byssinosis is not caused by mechanical irritation, but by chemical reactions involving the dusts, specifically due to a cell wall component found in cotton. Symptoms of byssinosis include chest tightness, wheezing and difficulty breathing. As the disease progresses, symptoms persist for longer periods and may eventually become constant. Eventually, the individual may show chronic bronchitis and emphysema. Increased physical exertion may produce shortness of breath.

Studies indicate that diets containing large amounts of non-absorbable polysaccharides, such as cellulose, might decrease absorption of calcium, magnesium, zinc and phosphorus.

This material contains a polymer with a functional group considered to be of low concern. Non-ring hydroxyl (-OH) groups in polymers (polyols) are not reactive, and are considered to be of low risk. Polyols occur naturally in the body and also include starch and cellulose.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME | CAS RN | % |
|---------------------|-----------|------|
| α -Cellulose | 9004-34-6 | > 99 |

Section 4 - FIRST AID MEASURES

SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE

If this product comes in contact with the eyes

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Protheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

- Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

| | |
|----------------------------|-----------------|
| Vapour Pressure (mmHG) | Not applicable. |
| Upper Explosive Limit (%) | Not available. |
| Specific Gravity (water=1) | approx. 1.5 |
| Lower Explosive Limit (%) | Not available. |

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.

- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use water delivered as a fine spray to control fire and cool adjacent area.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions.
- Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds.; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.
- In the same way as gases and vapours, dusts in the form of a cloud are only ignitable over a range of concentrations; in principle, the concepts of lower explosive limit (LEL) and upper explosive limit (UEL).are applicable to dust clouds but only the LEL is of practical use; - this is because of the inherent difficulty of achieving homogeneous dust clouds at high temperatures (for dusts the LEL is often called the "Minimum Explosible Concentration", MEC)
- A dust explosion may release of large quantities of gaseous products; this in turn creates a subsequent pressure rise of explosive force capable of damaging plant and buildings and injuring people.

Combustion products include carbon monoxide (CO), carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.

May emit poisonous fumes.

May emit corrosive fumes.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact by using protective equipment.

MAJOR SPILLS

Moderate hazard.

- CAUTION Advise personnel in area.
- Alert Emergency Services and tell them location and nature of hazard.
- Control personal contact by wearing protective clothing.
- Prevent, by any means available, spillage from entering drains or water courses.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts

may explode in the presence of an appropriate ignition source.

- Do NOT cut, drill, grind or weld such containers.
- In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

RECOMMENDED STORAGE METHODS

- Glass container is suitable for laboratory quantities
- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

| Source | Material | TWA ppm | TWA mg/m ³ | STEL ppm | STEL mg/m ³ | Peak ppm | Peak mg/m ³ | TWA F/CC | Notes |
|---|--------------------------------------|---------|-----------------------|----------|------------------------|----------|------------------------|----------|--------------------|
| Canada - Alberta Occupational Exposure Limits | cellulose (Cellulose) | | 10 | | | | | | |
| US NIOSH Recommended Exposure Limits (RELs) | cellulose (Cellulose) | | 5 | | | | | | (TWA (resp)) |
| US - Minnesota Permissible Exposure Limits (PELs) | cellulose (Cellulose - Total dust) | | 15 | | | | | | |
| Canada - British Columbia Occupational Exposure Limits | cellulose (Cellulose) | | 10 (N) | | | | | | |
| US NIOSH Recommended Exposure Limits (RELs) | cellulose (Cellulose) | | 10 | | | | | | (TWA (total)) |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | cellulose (Cellulose - Total dust) | | 15 | | | | | | |
| Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English) | cellulose (Cellulose (paper fibres)) | | 10 | | | | | | |
| US ACGIH Threshold Limit Values (TLV) | cellulose (Cellulose) | | 10 | | | | | | TLV® Basis URT irr |
| US OSHA Permissible Exposure Levels (PELs) - Table | cellulose (Cellulose - Respirable) | | 5 | | | | | | |

| | | | |
|---|--|----|----|
| Z1 | fraction) | | |
| US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants | cellulose (Cellulose - Respirable fraction) | 5 | |
| US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants | cellulose (Cellulose - Total dust) | 15 | |
| US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants | cellulose (Cellulose - Respirable fraction) | 5 | |
| US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants | cellulose (Cellulose - Total dust) | 15 | |
| US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants | cellulose (Cellulose Respirable fraction) | 5 | |
| US - Idaho - Limits for Air Contaminants | cellulose (Cellulose - Total dust) | 15 | |
| US - Minnesota Permissible Exposure Limits (PELs) | cellulose (Cellulose - Respirable fraction) | 5 | |
| US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants | cellulose (Cellulose Total Dust) | 15 | |
| US - Idaho - Limits for Air Contaminants | cellulose (Cellulose - Respirable fraction) | 5 | |
| US - Hawaii Air Contaminant Limits | cellulose (Cellulose - Total dust) | 10 | 20 |
| Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits | cellulose (Cellulose (paper fibre)) | 10 | 20 |

| | | | | |
|--|---|----------------|----|--|
| US - Alaska Limits for Air Contaminants | cellulose (Cellulose - Total dust) | 15 | | |
| US - Hawaii Air Contaminant Limits | cellulose (Cellulose - Respirable fraction) | 5 | | |
| US - Washington Permissible exposure limits of air contaminants | cellulose (Paper fiber (Cellulose) - Respirable fraction) | 5 | 10 | |
| US - Washington Permissible exposure limits of air contaminants | cellulose (Cellulose (paper fiber)-Total particulate) | 10 | 20 | |
| Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances | cellulose (Cellulose (paper fibre)) | (See Table 11) | | |
| Canada - Prince Edward Island Occupational Exposure Limits | cellulose (Cellulose) | 10 | | TLV® Basis URT irr |
| Canada - Nova Scotia Occupational Exposure Limits | cellulose (Cellulose) | 10 | | TLV Basis upper respiratory tract irritation |
| US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants | cellulose (Cellulose - Respirable fraction) | 5 | | |
| US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants | cellulose (Cellulose - Total dust) | 15 | | |
| US - Oregon Permissible Exposure Limits (Z-1) | cellulose (Cellulose Respirable Fraction) | - | 5 | Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. |
| US - Michigan Exposure Limits for Air Contaminants | cellulose (Cellulose, Respirable dust) | 5 | | |

| | | | |
|--|---|----|---|
| US - Alaska Limits for Air Contaminants | cellulose (Cellulose - Respirable fraction) | 5 | Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. |
| US - Oregon Permissible Exposure Limits (Z-1) | cellulose (Cellulose Total Dust) | 10 | |
| US - Michigan Exposure Limits for Air Contaminants | cellulose (Cellulose, Total dust) | 15 | |

PERSONAL PROTECTION



RESPIRATOR

•Particulate. (AS/NZS 1716 & 1715, EN 1432000 & 1492001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

HANDS/FEET

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- polychloroprene
- nitrile rubber
- butyl rubber
- fluorocautchouc

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Solid.

Does not mix with water.

Sinks in water.

| | | | |
|---------------------------|-----------------|---------------------------------|--------------------|
| State | Divided solid | Molecular Weight | (162.1)n |
| Melting Range (°F) | Not applicable. | Viscosity | Not Applicable |
| Boiling Range (°F) | Not applicable. | Solubility in water (g/L) | Immiscible |
| Flash Point (°F) | Not available. | pH (1% solution) | 5.0-7.0 (11% disp) |
| Decomposition Temp (°F) | Not available. | pH (as supplied) | Not applicable |
| Autoignition Temp (°F) | 450approx. | Vapour Pressure (mmHG) | Not applicable. |
| Upper Explosive Limit (%) | Not available. | Specific Gravity (water=1) | approx. 1.5 |
| Lower Explosive Limit (%) | Not available. | Relative Vapour Density (air=1) | Not applicable. |
| Volatile Component (%vol) | 4 (as water) | Evaporation Rate | Not applicable |

APPEARANCE

Odorless, solid, fibrous material or non-fibrous powder. Insoluble in water and organic solvents. Powder is dispersible in water. Bulk density 0.3 g/cm³.

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

STORAGE INCOMPATIBILITY

‡ Cellulose and its derivatives may react vigorously with calcium oxide, bleaching powder, perchlorates, perchloric acid, sodium chlorate, fluorine, nitric acid, sodium nitrate and sodium nitrite.

May be incompatible with aminacrine hydrochloride, chlorocresol, mercuric chloride, phenol, resorcinol, tannic acid and silver nitrate.

- Avoid reaction with oxidising agents

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

cellulose

TOXICITY AND IRRITATION

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may

be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.

CARCINOGEN

| | | |
|-------------|--|---|
| cellulose | US - Rhode Island Hazardous Substance List | IARC |
| VPVB_(VERY~ | US - Maine Chemicals of High Concern List | Carcinogen CA Prop 65; IARC; NTP 11th ROC |

Section 12 - ECOLOGICAL INFORMATION

No data

GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles

| Name / EHS Cas No / RTECS No | TRN | A1a | A1b | A1 | A2 | B1 | B2 | C1 | C2 | C3 | D1 | D2 | D3 | E1 | E2 | E3 |
|--|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|--|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|

| | | | | | | | | | | | | | | | | |
|--|-----|----|---|---|---|---|---|---|---|---|---|---|--|--|---|---|
| Alcohol ic beverag es / CAS:900 4- 34- 6 / | 293 | 85 | 0 | 0 | R | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | D | 1 |
|--|-----|----|---|---|---|---|---|---|---|---|---|---|--|--|---|---|

Legend: EHS=EHS Number (EHS=GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships) NRT=Net Register Tonnage, A1a=Bioaccumulation log Pow, A1b=Bioaccumulation BCF, A1=Bioaccumulation, A2=Biodegradation, B1=Acuteaquatic toxicity LC/ECIC50 (mg/l), B2=Chronic aquatic toxicity NOEC (mg/l), C1=Acute mammalian oral toxicity LD50 (mg/kg), C2=Acute mammalian dermal toxicity LD50 (mg/kg), C3=Acute mammalian inhalation toxicity LC50 (mg/kg), D1=Skin irritation & corrosion, D2=Eye irritation & corrosion, D3=Long-term health effects, E1=Tainting, E2=Physical effects on wildlife & benthic habitats, E3=Interference with coastal amenities, For column A2: R=Readily biodegradable, NR=Not readily biodegradable. For column D3: C=Carcinogen, M=Mutagenic, R=Reprotoxic, S=Sensitising, A=Aspiration hazard, T=Target organ systemic toxicity, L=Lunginjury, N=Neurotoxic, I=Immunotoxic. For column E1: NT=Not tainting (tested), T=Tainting test positive. For column E2: Fp=Persistent floater, F=Floater, S=Sinking substances. The numerical scales start from 0 (no hazard), while higher numbers reflect increasing hazard. (GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships)

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the supplier of the material should be consulted.

- DO NOT allow wash water from cleaning or process equipment to enter drains.

- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

Section 15 - REGULATORY INFORMATION

cellulose (CAS: 9004-34-6,68442-85-3) is found on the following regulatory lists;

"Canada - Alberta Occupational Exposure Limits","Canada - British Columbia Occupational Exposure Limits","Canada - Nova Scotia Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits","Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)","Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","Canada Domestic Substances List (DSL)","Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)","CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP","International Fragrance Association (IFRA) Survey: Transparency List","US - Alaska Limits for Air Contaminants","US - Hawaii Air Contaminant Limits","US - Idaho - Limits for Air Contaminants","US - Michigan Exposure Limits for Air Contaminants","US - Minnesota Hazardous Substance List","US - Minnesota Permissible Exposure Limits (PELs)","US - Oregon Permissible Exposure Limits (Z-1)","US - Pennsylvania - Hazardous Substance List","US - Rhode Island Hazardous Substance List","US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants","US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants","US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants","US - Washington Permissible exposure limits of air contaminants","US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants","US ACGIH Threshold Limit Values (TLV)","US DOE Temporary Emergency Exposure Limits (TEELs)","US NIOSH Recommended Exposure Limits (RELs)","US OSHA Permissible Exposure Levels (PELs) - Table Z1","US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory","US USDA National Organic Program - Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as "organic" or "made with organic (specified ingredients or food group(s))"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE

- Inhalation may produce health damage*.
 - Cumulative effects may result following exposure*.
- * (limited evidence).

Ingredients with multiple CAS Nos

| Ingredient Name | CAS |
|-----------------|-----------------------|
| cellulose | 9004-34-6, 68442-85-3 |

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- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at: www.chemwatch.net/references.
- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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