



Microcrystalline Cellulose
Safety Data Sheet
Technical Specifications
Intolerance Data

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we provide service.

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1. Safety Data Sheet



1.1 Description

Product Name	Microcrystalline Cellulose
Product Code	MCC
Supplier	LFA Machines Oxford Ltd. Unit 4b, 26-27 Murdock Road Bicester, Oxfordshire OX26499 United Kingdom Tel: +44 (0) 1869 250 234

1.2 Ingredients/Identity Information

Components	Microcrystalline cellulose
% in Product	100
CAS Number	9004-34-6
Formula	C ₆ H ₁₀ O ₅ N
EINECS Number	3912-90-90

1.3 Hazards Identification



Potential Acute Health Effects	Slightly hazardous in case of eye contact (irritant), of ingestion, of inhalation, non-irritant for skin.
Potential Chronic Health Effects	Not available
Carcinogenic Effects	Not available
Mutagenic Effects	Not available
Teratogenic Effects	Not available
Developmental Toxicity	Not available
Hazardous Symbol/ Pictograms	Not applicable
Signal Words	Not applicable

Repeated or prolonged exposure is not known to aggravate medical condition.

To the best of our knowledge, our products do not contain any contaminants or by-products known to the State of California that cause cancer or reproductive toxicity as listed under Proposition 65 Drinking Water and Toxic Enforcement Act.

1.4 First Aid Procedures



Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin Contact	Wash with soap and water. Get medical attention if irritation develops.
Serious Skin Contact	Get medical attention.
Inhalation	If inhaled, move to fresh air. If unable to breathe, give artificial respiration/CPR. If breathing is difficult, give oxygen. Get medical attention if irritation develops.
Serious Inhalation	Get medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collars, ties, belts, or waistbands. Seek medical attention if symptoms appear.
Serious Ingestion	Get medical attention.

1.5 Fire and Hazard Data



Flammability of Product	May be combustible at high temperatures.
Temperature	Not available
Flash Points	Not available
Flammable Limits	Not available
Products of Combustion	Not available

Fire Hazards in Presence of Various Substances

Slightly flammable in presence of open flames and sparks of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances

Risks of explosion of the product in presence of mechanical impact is not available.
Risks of explosion of the product in the presence of static discharge is not available.

Fire Fighting Media and Instructions

Small fire: Use dry chemical powder.
Large fire: Use water spray, fog, or foam. Do not use water jet.

Special Remarks on Explosion Hazards

Damp cellulose can be a significant fire hazard since it may undergo spontaneous combustion. Fire and explosions may occur from reactions involving pentafluoride, acetic acid, and cellulose. Contact between cellulose and sodium nitrite at elevated temperatures results in vigorous burning from decomposition reaction.

Special Remarks on Explosion Hazards

Fire and explosions may occur from reactions involving pentafluoride, acetic acid, and cellulose. Contact between cotton and fluorine may result in violent explosion. Excess dust generation may create explosion hazard.



1.6 Release/Spill Measures

Small Spill

Use appropriate tools to put the spilled solid in an appropriate container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow it to evacuate through the sanitary system.

1.7 Storage

Precautions

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, so evaporate the residue under a fume hood.

Ground all equipment containing material. Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the label or container.

Storage

Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

1.8 Control Methods/PPE

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to airborne levels below recommended exposure limits. If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protective Equipment

- Safety glasses
- Lab coat
- Dust respirator
- Gloves (impervious)

Personal Protective Equipment in Case of Large Spill

Note: Consult a specialist before handling this product to ensure that the suggested PPE below is sufficient.

- Splash goggles
- Full suit
- Dust respirator
- Boots
- Gloves



Exposure Limits	
ACGIH (TLV) (United States) Inhalation Total	TWA 10(mg/m ³)
British Columbia Occupational Exposure Limit (Canada) Inhalation Total	TWA 10(mg/m ³) available
British Columbia Occupational Exposure Limit (Canada) Inhalation Respirable	TWA 3
OSHA (PEL) (United States) Inhalation Total	TWA 15(mg/m ³)
OSHA (PEL) (United States) Inhalation Respirable	TWA 5(mg/m ³)
(United Kingdom) Inhalation Total	TWA 10 STEL 20(mg/m ³)
(United Kingdom) Inhalation Respirable	3

Consult local authorities for acceptable exposure limits.

1.9 Physical and Chemical Properties



Physical State	Powder
Color	White to off-white
Odor	Characteristic
Solubility	Insoluble

1.10 Stability and Reactivity

Stability	The product is stable.
Instability Temperature	Not available
Conditions of Instability	Excess heat, incompatible materials
Corrosivity	Non-corrosive in presence of glass
Polymerization	Will not occur

1.11 Toxicological Information



Routes of Entry	Inhalation and ingestion
Toxicity to Animals (The LC50 values hereunder are estimated on basis of 4-hour exposure)	
Acute Oral Toxicity (LD50)	>5000 mg/kg (Rat)
Acute Dermal Toxicity (LD50)	>2000 mg/kg (Rabbit)
Acute Toxicity of Dust (LC50)	5800 mg/m ³ (Rat)
Chronic Effects on Humans	Not available
Other Effects on Humans	Slightly hazardous in case of ingestion and/or inhalation. Non-irritant for skin.

Special Remarks on Other Toxicity Effects on Humans

Acute Potential Health Effects below:

Skin: It is not known to cause skin irritation.

Ingestion: Ingestion in large amounts may cause digestive tract irritation.

Eyes: Dust may cause mechanical irritation.

To the best of our knowledge there are no known cases of adverse effects or disease in humans from exposure to cellulose. Purified cellulose is known to be essentially inert. Pure cellulose dust is not known to be irritating or toxic.

Chronic inhalation of cellulose-containing fibers can cause byssinosis. No significant adverse reactions were seen in chronic feeding studies with purified cellulose in mice and rats.

1.12 Ecological Information



Ecotoxicity	Not available
BOD5 and COD	Not available
Products of Biodegradation	Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are more toxic.

1.13 Disposal Considerations

Waste from Residue

Dispose of in accordance with all applicable local and national regulations.

1.14 Transport Information

Transport Classification

Not classified as dangerous for any mode of UK or International transport.

1.15 Regulatory Information

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

DSCL (EEC): This product is not classified according to the EU regulations.

Reviews, Standards, and Regulations: Health & Safety at Work Act 1974. COSHH Regulations (1994). EH40 Occupational Exposure Limits.

1.16 Other Information



This advice is given by LFA Machines Oxford Ltd., who accept no legal liability for it. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

Individuals working with chemicals should consider all chemicals to be potentially hazardous even if their individual hazards may be uncharacterized or unknown.

We confirm that the information above is sourced from the original manufacturers/suppliers.

2. Technical Specifications

2.1 Product Data



Product Code	MCC
Raw Material Full Name	Microcrystalline Cellulose
Assay (Dried)	97.0%-102.0%
CAS Number	9004-34-6
EC/EINECS Number	3912-90-90
Molecular Formula for the Raw Material	$C_6H_{10}O_{5n}$
Solubility in Water	Insoluble in water
Solubility in Alcohol	Insoluble in ethanol
Water Soluble Substances	Max 0.25%
Ether Soluble Substances	Max 0.05%
Loss on Drying	Max 7%
Sieve Analysis (% Retention)	60 mesh <8.0% 200 Mesh >45.0%
Particle Size Distribution	D10 <45 μ D50 70 - 100 μ D90 >140 μ
pH	5.0-7.5
Conductivity	Max 75 μ S
Residue on Ignition	Max 0.1%
Country of Origin	India
Country of Origin of the Manufacture	USA
Base Source/Start Material	Alpha cellulose wood pulp
Origin of Product (Synthetic, Mineral, Animal, Fish, or Fermented)	Plant
Compound Ingredients	None
Shelf Life from Date of Manufacture	5 years
Storage Conditions	This material is to be stored in a tightly sealed bag/container and to be kept in a cool place away from the moisture and direct sunlight.
Appearance (Color, Flavor/Taste, Texture, Odor)	Free flowing fine powder. Color is white to off-white. Flavor/taste is characteristic. Texture is powder. Odor is characteristic.
Bulk Density	0.20 g/ml-0.60 g/ml

2.2 Microbiological Test



Total Viable Count	Max 1,000 cfu/g
Yeast & Moulds	Max 100 cfu/g
E. Coli	Absent
Salmonella	Absent
Staphylococcus aureus	Absent

2.3 Metals

Heavy Metals	Max 10 ppm
Lead (Pb)	<0.200 ppm
Cadmium (Cd)	<0.200 ppm
Mercury (Hg)	<0.200 ppm
Arsenic (As)	<0.200 ppm
Pharmacopoeia Standard Used	ICP-OES

There are no nuts in this recipe, and there are no nuts on site. However, we cannot guarantee that the raw materials entering the site are nut free.

2.4 Confirmation of Status List



CONFIRMATION OF BSE/TSE STATUS

This is to certify that this product complies with all relevant current UK and EU Legislative requirements in regard to Transmissible Spongiform Encephalopathy (TSE) and Bovine Spongiform Encephalopathy (BSE) for human food, and so is free of TSE/BSE. This is also to certify that, during the course of their manufacture, the above-mentioned product did not come into contact with any materials, which could be derived from TSE/BSE risk materials.

CONFIRMATION OF GM STATUS

This is to certify that this product is not manufactured from GM raw materials and is therefore not subject to labelling under regulations 1829/2003/EC and 1830/2003/EC.

CONFIRMATION OF NON-IRRADIATION STATUS

This is to certify that this product, whole or in part, has not been subjected to ionizing radiation as per European Directives 1999/2/EC and 1000/3/EC.

CONFIRMATION OF NANDROLONE STATUS

This is to certify that this product, whole or in part, has not come into contact with Nandrolone or any of its precursors in any way.

CONFIRMATION OF IOC PRODUCT STATUS

This is to certify that this product, whole or in part, has not come into contact with any product(s) banned by the IOC (International Olympics Committee).

CONFIRMATION OF ANIMAL TESTING STATUS

This is to certify that all the products sold by LFA Machines Oxford Ltd. have not been tested on animals in any part of its manufacture in accordance with regulation 86/609/EEC.

CONFIRMATION OF PESTICIDES STATUS

This is to certify that the above-mentioned product complies with the regulation (EC) No. 396/2005 of 23rd February 2005 and commission regulation (EU) No. 559/2011 of 7th June 2011 amending annexes II and III of the above Regulation.

3. Intolerance Data

3.1 Intolerance Data Table



Free from all animal products (beef, pork, poultry, or other)	YES
Free from bovine products or derivatives by using hormones to increase milk yield in cows	YES
Free from bone meal	YES
Free from peanuts and peanut derivatives (including possible cross contamination)	YES
Free from other nut and nut derivatives	YES
Free from nut derived oil	YES
Free from sesame seeds and sesame seed derivatives	YES
Free from poppy seeds and poppy seed derivatives	YES
Free from sunflower seeds and sunflower seed derivatives	YES
Free from other seeds and seed derivatives	YES
Free from milk and milk derivatives	YES
Free from egg and egg derivatives	YES
Free from cereals containing gluten (wheat/rye/oats/barley/spelt/kamut or their hybridized strains) and derivatives	YES
Free from soya and soya derivatives	YES
Free from maize and maize derivatives	YES
Free from corn and corn derivatives	YES
Free from lupin and lupin derivatives	YES
Free from yeast and yeast derivatives	YES
Free from cotton seeds (flour) and cotton seed derivatives	YES
Free from rice and rice derivatives	YES
Free from mustard and mustard derivatives	YES
Free from celery and celery derivatives	YES
Free from celeriac and celeriac derivatives	YES
Free from fruit and fruit derivatives	YES
Free from vegetable and vegetable derivatives	YES
Free from carrot and carrot derivatives	YES
Free from legumes/pulses	YES



Free from fish and fish derivatives	YES
Free from crustaceans and/or molluscs and their derivatives	YES
Free from additives	YES
Free from added salt	YES
Free from added sugar	YES
Free from antioxidants	YES
Free from artificial glutamates	YES
Free from aspartame	YES
Free from Azo and coal tar dyes	YES
Free from benzoates (E210/E219)	YES
Free from BHA/BHT (E320/E321)	YES
Free from caffeine	YES
Free from cinnamon	YES
Free from cocoa	YES
Free from colors (artificial/nature identical/natural/smoked)	YES
Free from dextrose	YES
Free from dioxins	YES
Free from ethanol	YES
Free from ethylene oxide	YES
Free from flavorings (artificial/nature identical/natural/smoked)	YES
Free from garlic	YES
Free from gelatine	YES
Free from glutamates (E620 to E625)	YES
Free from histamine	YES
Free from hickory	YES
Free from honey	YES
Free from lactose	YES



Free from latex	YES
Free from MSG (added and naturally occurring E621)	YES
Free from nucleotides (E627, E630, E631. E635)	YES
Free from polyols	YES
Free from preservatives	YES
Free from starch products (including maltodextrin)	YES
Free from sorbic acid (E200, E203)	YES
Free from sulphur dioxide and sulphites at levels above 10 mg/kg or 10 mg/liter express as SO²	YES
Free from sweeteners	YES
Free from vanillin	YES
Suitable for diabetics	YES
Suitable for Celiacs	YES
Suitable for Ovo-Lacto Vegetarians	YES
Suitable for Vegans	YES
Kosher Certified	YES
Halal Certified	YES



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