

Product: Microcel - Microcrystalline cellulose (MCC)

Date of last revision 15/06/2015	Number of last revision: 4	SDS N° 1	Page 1 of 7
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1. Identification

Product identifier: Microcel - Microcrystalline cellulose (MCC)**Recommended use of the chemical:** Agent compression and compaction to tablets. Extrusion aid and source of fiber in foods.**Identification Code:** MC-12, MC-101, MC-101SP, MC-102, MC-102SP, MC-200, FG-12, FG-101, FG-102, FG-200, FG-20**Supplier's name:** Blanver Farmoquímica Ltda**Address:** Rua Dr. José Alexandre Crosnag, 715**Complement:** CEP: 06680.035 – ITAPEVI - SP – BRASIL**Supplier's phone number:** 55 - 11 - 4144-9400**Emergency phone number:** 55 11 4138-8223

2. Hazard identification

Classification of the substance or mixture: Chemical not classified as hazardous according to GHS**Precautionary recommendations:** Undiluted material may cause eye irritation.**Other information:** Powder becomes slippery when wet.

3. Composition/Information on ingredients

Product Type: Substance**Common chemical name or technical name:** Microcrystalline cellulose**Synonym:** MCC, cellulose gel**CAS N°:** 9004-34-6**This substance does not contain impurities that contribute to its hazard.**

4. First-aid measures

First-aid measures

- **Inhalation:** Remove to fresh air. If breathing difficulty or discomfort occurs. Consult a doctor in case of symptoms.
- **Skin contact:** Wash skin area with water and soap.
- **Eye contact:** Rinse with water keeping the eyelids wide open. Irritation may occurs, if persists consult a doctor.
- **Ingestion:** Drink plenty of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

Most important symptoms/effects, acute and delayed: Chemical not classified as hazardous according to GHS.**Indication of immediate medical attention and special treatment:** Treatment is symptomatic.

Product: Microcel - Microcrystalline cellulose (MCC)

Date of last revision 15/06/2015	Number of last revision: 4	SDS N° 1	Page 2 of 7
-------------------------------------	-------------------------------	-------------	----------------

5. Fire-fighting measures

Suitable extinguishing media: Water, foam and dry chemical.

Unsuitable extinguishing media: Not applicable.

Specific hazards arising from the chemical: Keep away from ignition sources. The accumulation of excessive dust on overhead structures may produce explosive concentrations when disturbed and dispersed.

Special protective actions for fire-fighters: Wear full protective clothing and NIOSH/MSHA approved respirator.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- **For non-emergency personnel:** Avoid causing dust and ensure adequate ventilation. Remove all ignition sources. Use appropriate personal protective equipment (goggles, face shield, impervious gloves, lab coat). Keep away from sources of ignition. Avoid contact with skin, eyes. Avoid prolonged inhalation of dust.
- **For emergency responders:** Firefighters should wear protective equipment and self-contained breathing apparatus.

Environmental precautions: No special measures required. Do not allow to enter into soil / subsoil and surface water or sewage. Ensure that waste is collected and stored.

Methods and materials for containment: Absorb with inert absorbent material. Avoid contact with water until all material has been collected and discarded. Then, the area may be washed with water.

Area isolation: No special measures required.

Methods and materials for cleaning up: Minimize the settled dust accumulation. Wear protective equipment. Absorb with an inert material. Sweep the material into a garbage container. After collected and discarded, wash the area with water.

7. Handling and storage

Precautions for safe handling

- **Prevention of workers exposure:** Ensure good ventilation / exhaustion. Avoid contact with eyes, skin, and clothing. Shut off all sources of ignition,
- **Fire and explosion:** Keep away from any flame or source of ignition.
- **Precautions for safe handling:** Handle the product carefully in accordance with good industrial hygiene practices and avoid personal contact. Ensure good ventilation / exhaustion. Avoid contact with eyes, skin, and clothing
- **Hygiene measures**
 - **Suitable:** Follow the usual precautionary measure for handling chemicals / powder. Immediately remove all soiled and contaminated clothing.
 - **Unsuitable:** Keep away from food and beverages.

Product: Microcel - Microcrystalline cellulose (MCC)

Date of last revision 15/06/2015	Number of last revision: 4	SDS N° 1	Page 3 of 7
-------------------------------------	-------------------------------	-------------	----------------

Conditions for safe storage

- **Conditions for safe storage:** Store in a dry and ventilated area to maintain the integrity of the product. Avoid excessive heat. Preserve in tight containers under the right conditions. Prevent dust formation.
- **Conditions to avoid including incompatibilities:** Higher temperatures. Incompatible with strong oxidizing agents.
- **Packaging materials**
 - **Suitable:** Not available.
 - **Unsuitable:** Not available.

Other information: Remove contaminated clothing immediately. Ensure good ventilation. Prevent dust formation.

8. Exposure controls/personal protection

Control parameters

- **Occupational exposure limits:** Microcrystalline Cellulose: OSHA PEL: TWA 15 mg/m³ (total) TWA 5 mg/m³ (resp); NIOSH REL: TWA 10 mg/m³ (total) TWA 5 mg/m³ (resp) Carboxymethylcellulose Sodium: PNOR (Particulates Not Otherwise Regulated): TWA 15 mg/m³ (total); TWA 5 mg/m³ (resp)
- **Biological indicators values:** Not available.
- **Other limits and values:** Not available.

Appropriate engineering controls: Leave the place and general room ventilation are required to maintain exposure standards.

Individual protection measures, such as personal protective equipment

- **Eye/face protection:** Safety glasses or chemical goggle
- **Skin protection:** Appropriate dust resistant clothing and protective gloves.
- **Respiratory protection:** Dust mask or respirator approved by NIOSH/MSHA is required (in the absence of proper environmental controls).
- **Hands protection:** No special gloves are required.
- **Thermal hazards:** Not available.

Other information: Not available.

9. Physical and chemical properties

- **Appearance**
Physical state: Sólido; **Form:** Powder ; **Color:** White
- **Odour:** Odorless
- **Odour threshold:** Not available.

Product: Microcel - Microcrystalline cellulose (MCC)

Date of last revision 15/06/2015	Number of last revision: 4	SDS N° 1	Page 4 of 7
-------------------------------------	-------------------------------	-------------	----------------

- **pH:** 5.0 a 7.5
- **Melting point/freezing point:** Not available.
- **Initial boiling point:** Not available.
- **Boiling range:** Not available.
- **Flash point:** Not available.
- **Evaporation rate:** Not available.
- **Flammability (solid, gas):** Not available.
- **Lower flammability or explosive limits:** Not available.
- **Upper flammability or explosive limits:** Not available.
- **Vapour pressure:** Not available.
- **Vapour density:** Not available.
- **Relative density:** Not available.
- **Solubility(ies):** Insoluble in water, partially soluble in alkalis.
- **Partition coefficient: n-octanol/water:** Not available.
- **Auto-ignition temperature:** Not available.
- **Decomposition temperature:** 340 °C / 644 °F
- **Viscosity:** Not available.
- **Additional information:** Not available.

10. Stability and reactivity

Chemical stability: Stable under recommended storage conditions.

Reactivity: Strong oxidizers agents.

Possibility of hazardous reactions: Hazardous polymerization does not occur.

Conditions to avoid: Heat, flame and ignition sources.

Incompatible materials: Strong oxidizers agents.

Hazardous decomposition products: Carbon monoxide and carbon dioxide may be formed by heat decomposition.

11. Toxicological information

Acute toxicity: The mixture is not classified for this hazard seconds GHS criteria.

Skin corrosion/irritation: The mixture is not classified for this hazard seconds GHS criteria.

Serious eye damage/irritation: The mixture is not classified for this hazard seconds GHS criteria.

Respiratory or skin sensitization: The mixture is not classified for this hazard seconds GHS criteria.

Germ cell mutagenicity: The mixture is not classified for this hazard seconds GHS criteria.

Carcinogenicity: The mixture is not classified for this hazard seconds GHS criteria.

Reproductive toxicity: The mixture is not classified for this hazard seconds GHS criteria.

STOT-single exposure: The mixture is not classified for this hazard seconds GHS criteria.

STOT-repeated exposure: The mixture is not classified for this hazard seconds GHS criteria.

Aspiration hazard: The mixture is not classified for this hazard seconds GHS criteria.

Product: Microcel - Microcrystalline cellulose (MCC)

Date of last revision 15/06/2015	Number of last revision: 4	SDS N° 1	Page 5 of 7
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Additional information: Not available.

12. Ecological information

Toxicity: The mixture is not classified for this hazard seconds GHS criteria.

Persistence and degradability: The mixture is not classified for this hazard seconds GHS criteria.

Bio accumulative potential: The mixture is not classified for this hazard seconds GHS criteria.

Mobility in soil: The mixture is not classified for this hazard seconds GHS criteria.

Other adverse effects: Not available.

13. Disposal considerations

Disposal methods

- **Product:** Could be disposed off by industrial trash or incinerated, in accordance with local regulations. It is the user's responsibility to comply with all applicable local, state, and federal laws, rules, regulations and standards.
- **Used package:** Could be disposed off by industrial trash or incinerated, in accordance with local regulations. Do not reuse empty containers. No special disposal methods are suggested. It is the user's responsibility to comply with all applicable local, state, and federal laws, rules, regulations and standards.

14. Transport information

Technical name: Microcrystalline cellulose (MCC).

Additional information: The characteristics of the product does not meet the official criteria of dangerous goods for purposes of transportation.

Additional Regulation: Not listed in Title 49 of the U.S. Code of Federal Regulations as a hazardous material. / National Motor Freight Classification Item 71390, Flour Cellulose, Edible., ADR - EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD-Not applicable., INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) / INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA) ADDITIONAL INFORMATION: Not applicable , Canada (TDG) : Not applicable

15. Regulatory information

Safety, health and environmental regulations specific for the product:

Brazil:

Norma Reguladora 26 - Decreto 229.

Product: Microcel - Microcrystalline cellulose (MCC)

Date of last revision 15/06/2015	Number of last revision: 4	SDS N° 1	Page 6 of 7
-------------------------------------	-------------------------------	-------------	----------------

ABNT NBR 14725 Partes 1, 2, 3 e 4.

United States:

OSHA, 29 CFR 1910. 1200(g) and Appendix. D.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT) SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A): Not applicable SECTION 311 HAZARD CATEGORIES (40 CFR 370): None

E NUMBERS: E 460(i) (microcrystalline cellulose)

INTERNATIONAL LISTINGS MCC Australia (AICS): Listed China: Listed Japan (ENCS): (8)-568 Korea: KE-05339 Philippines (PICCS): Listed

16. Other information

Other information that does not belong in other sections:

This Safety Data Sheet (SDS) has been prepared based on current knowledge about chemicals and provides information about protection, safety, health and environment. It is warned that any chemical handling requires prior knowledge of its hazards by the user. The user company is responsible to promote the training of its employees about the potential product risks.

Emergency:

- Brasil:

Phone Number: 55 11 4138-8223 / Fax: 55 - 11 – 4144 - 9401

E-mail: talles.ernica@blanver.com.br

- EUA:

Phone Number : 1- 561-416-5513 Fax: 1-561-416-5663

E-mail: passos@blanver.com

- Espanha:

Phone Number: +34- 936- 222- 099

E-mail: pere@blanver.com.com

NFPA Health 0 Flammability 1 Reactivity 0 Special None No special requirements

Product: Microcel - Microcrystalline cellulose (MCC)

Date of last revision 15/06/2015	Number of last revision: 4	SDS N° 1	Page 7 of 7
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NFPA (National Fire Protection Association) Degree of Hazard Code: 4 = Extreme 3 = High 2 = Moderate 1 = Slight 0 = Insignificant

References: [ECHA] EUROPEAN CHEMICAL AGENCY. Available in: <http://echa.europa.eu/>
[HSNO] NEW ZEALAND HSNO Chemical Classification and Information Database (CCID)
[OSHA] OSHA'S Hazard Communication. Available in: <https://www.osha.gov/dsg/hazcom/>
[GHS] United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Subtitles and abbreviations: ACGIH - American Conference of Governamental Industrial, BCF - Bioconcentration factor, CAS - Chemical Abstracts Service