



# SAFETY DATA SHEET

## SPECIALTY ELECTRONIC MATERIALS SWITZERLAND GMBH

Safety Data Sheet according to Reg. (EU) No 2015/830

**Product name:** ETHOCEL™ Standard 4 Premium  
Ethylcellulose

**Revision Date:** 16.10.2018

**Version:** 1.0

**Date of last issue:** -

**Print Date:** 15.01.2020

SPECIALTY ELECTRONIC MATERIALS SWITZERLAND GMBH encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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### 1.1 Product identifier

**Product name:** ETHOCEL™ Standard 4 Premium Ethylcellulose

**Chemical name of the substance:** Cellulose, ethyl ether

**CASRN:** 9004-57-3

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

**Identified uses:** Thickener. Processing aid. Coating agent. Filler. Binder.

### 1.3 Details of the supplier of the safety data sheet

#### COMPANY IDENTIFICATION

SPECIALTY ELECTRONIC MATERIALS

SWITZERLAND GMBH

GROSSMATTE 4

6014 LUZERN

SWITZERLAND

**Customer Information Number:**

800-3876-6838

SDSQuestion-EU@dupont.com

### 1.4 EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** +(41)- 435082011

**Local Emergency Contact:** +(31)-858880596

**The phone number of the national poisoning information center (NVIC). Intended solely to inform professional rescuers in case of acute poisoning:** +31 30 – 2748888

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## SECTION 2: HAZARDS IDENTIFICATION

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### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008:**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008:

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

### 2.3 Other hazards

May form combustible dust concentrations in air.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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### 3.1 Substances

This product is a substance.

| CASRN /<br>EC-No. /<br>Index-No.                          | REACH<br>Registration<br>Number | Concentration       | Component                 | Classification:<br>REGULATION (EC) No<br>1272/2008 |
|---|---------------------------------|---------------------|---------------------------|--|
| CASRN<br>9004-57-3<br>EC-No.<br>Polymer<br>Index-No.<br>- | -                               | > 95,0 - <= 100,0 % | Cellulose, ethyl<br>ether | Not classified                                     |

If present in this product, any not classified components disclosed above for which no country specific OEL value(s) is(are) indicated under Section 8, are being disclosed as voluntarily disclosed components.

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## SECTION 4: FIRST AID MEASURES

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### 4.1 Description of first aid measures

#### General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Wash off with plenty of water.

**Eye contact:** Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** No emergency medical treatment necessary.

### 4.2 Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

#### **4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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## **SECTION 5: FIREFIGHTING MEASURES**

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### **5.1 Extinguishing media**

**Suitable extinguishing media:** Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.

**Unsuitable extinguishing media:** No data available

### **5.2 Special hazards arising from the substance or mixture**

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Do not permit dust to accumulate. When suspended in air dust can pose an explosion hazard. Minimize ignition sources. If dust layers are exposed to elevated temperatures, spontaneous combustion may occur. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge.

### **5.3 Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires. Dust explosion hazard may result from forceful application of fire extinguishing agents.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**6.1 Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**6.2 Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**6.3 Methods and materials for containment and cleaning up:** Sweep up. Use care to minimize generation of airborne dust. Do not use water for cleanup. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

**6.4 Reference to other sections:** References to other sections, if applicable, have been provided in the previous sub-sections.

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## SECTION 7: HANDLING AND STORAGE

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**7.1 Precautions for safe handling:** No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Keep away from heat, sparks and flame. Keep container closed. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**7.2 Conditions for safe storage, including any incompatibilities:** Keep in a dry place. Store indoors. Store in a closed container. Store away from sources of heat or ignition. See Section 10 for more specific information.

**7.3 Specific end use(s):** See the technical data sheet on this product for further information.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

| Component              | Regulation | Type of listing | Value/Notation       |
|------------------------|------------|-----------------|----------------------|
| Cellulose, ethyl ether | Dow IHG    | TWA             | 10 mg/m <sup>3</sup> |

### 8.2 Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

#### Individual protection measures

**Eye/face protection:** Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.

#### Skin protection

**Hand protection:** Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

**Other protection:** No precautions other than clean body-covering clothing should be needed.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk

assessment process. For most conditions, no respiratory protection should be needed; however, in dusty atmospheres, use an approved particulate respirator. Use the following CE approved air-purifying respirator: Particulate filter, type P2 (meeting standard EN 143).

### Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

#### Appearance

|  |  |
|--|--|
| Physical state                         | Powder   |
| Color                                  | White to tan                                     |
| Odor                                   | Odorless to mild                                 |
| Odor Threshold                         | No test data available                           |
| pH                                     | Not applicable                                   |
| Melting point/range                    | No test data available                           |
| Freezing point                         | Not applicable                                   |
| Boiling point (760 mmHg)               | Not applicable                                   |
| Flash point                            | <b>closed cup</b> No test data available         |
| Evaporation Rate (Butyl Acetate = 1)   | Not applicable                                   |
| Flammability (solid, gas)              | May form combustible dust concentrations in air. |
| Lower explosion limit                  | No test data available                           |
| Upper explosion limit                  | No test data available                           |
| Vapor Pressure                         | Not applicable                                   |
| Relative Vapor Density (air = 1)       | Not applicable                                   |
| Relative Density (water = 1)           | No test data available                           |
| Water solubility                       | Insoluble in water                               |
| Partition coefficient: n-octanol/water | No data available                                |
| Auto-ignition temperature              | No test data available                           |
| Decomposition temperature              | No test data available                           |
| Kinematic Viscosity                    | No test data available                           |
| Explosive properties                   | No data available                                |
| Oxidizing properties                   | No data available                                |

### 9.2 Other information

|                  |                        |
|------------------|------------------------|
| Molecular weight | No test data available |
|------------------|------------------------|

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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**SECTION 10: STABILITY AND REACTIVITY**

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**10.1 Reactivity:** No data available

**10.2 Chemical stability:** Stable under recommended storage conditions. See Storage, Section 7.

**10.3 Possibility of hazardous reactions:** Polymerization will not occur.

**10.4 Conditions to avoid:** Avoid temperatures above 160°C (320°F) Exposure to elevated temperatures can cause product to decompose. Avoid static discharge. Avoid moisture.

**10.5 Incompatible materials:** Avoid contact with oxidizing materials.

**10.6 Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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*Toxicological information appears in this section when such data is available.*

**11.1 Information on toxicological effects****Acute toxicity****Acute oral toxicity**

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

LD50, Rat, > 5 000 mg/kg

**Acute dermal toxicity**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, Rabbit, > 5 000 mg/kg

**Acute inhalation toxicity**

As product:

The LC50 has not been determined.,

Vapors are unlikely due to physical properties. No adverse effects are anticipated from single exposure to dust. For respiratory irritation and narcotic effects: No relevant data found.

**Skin corrosion/irritation**

Prolonged exposure not likely to cause significant skin irritation.

**Serious eye damage/eye irritation**

Mechanical injury only.

**Sensitization**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Repeated ingestion of similar cellulosics by humans has not resulted in known significant adverse effects.

**Carcinogenicity**

For the major component(s): Did not cause cancer in laboratory animals.

**Teratogenicity**

No relevant data found.

**Reproductive toxicity**

No relevant data found.

**Mutagenicity**

No relevant data found.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

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## **SECTION 12: ECOLOGICAL INFORMATION**

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*Ecotoxicological information appears in this section when such data is available.*

**12.1 Toxicity**

**Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

**12.2 Persistence and degradability**

**Biodegradability:** No appreciable biodegradation is expected.

**12.3 Bioaccumulative potential**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

**12.4 Mobility in soil**

No relevant data found.

**12.5 Results of PBT and vPvB assessment**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**12.6 Other adverse effects**

No relevant data found.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment methods**

Any disposal practice must be in compliance with all local and national laws and regulations. Do not dump into any sewers, on the ground, or into any body of water.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

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**SECTION 14: TRANSPORT INFORMATION**

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**Classification for ROAD and Rail transport (ADR/RID):**

- |                                   |   |
|-----------------------------------|---|
| 14.1 UN number                    | Not applicable  |
| 14.2 UN proper shipping name      | Not regulated for transport                                       |
| 14.3 Transport hazard class(es)   | Not applicable  |
| 14.4 Packing group                | Not applicable  |
| 14.5 Environmental hazards        | Not considered environmentally hazardous based on available data. |
| 14.6 Special precautions for user | No data available.  |

**Classification for SEA transport (IMO-IMDG):**

- |   |   |
|---|---|
| 14.1 UN number  | Not applicable  |
| 14.2 UN proper shipping name  | Not regulated for transport                                 |
| 14.3 Transport hazard class(es)   | Not applicable  |
| 14.4 Packing group  | Not applicable  |
| 14.5 Environmental hazards  | Not considered as marine pollutant based on available data. |
| 14.6 Special precautions for user   | No data available.  |
| 14.7 Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code | Consult IMO regulations before transporting ocean bulk      |

**Classification for AIR transport (IATA/ICAO):**

- |                                   |                             |
|-----------------------------------|-----------------------------|
| 14.1 UN number                    | Not applicable              |
| 14.2 UN proper shipping name      | Not regulated for transport |
| 14.3 Transport hazard class(es)   | Not applicable              |
| 14.4 Packing group                | Not applicable              |
| 14.5 Environmental hazards        | Not applicable              |
| 14.6 Special precautions for user | No data available.          |



This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## SECTION 15: REGULATORY INFORMATION

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### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### REACH Regulation (EC) No 1907/2006

Polymers are exempted from registration under REACH. All relevant starting materials and additives have been either pre-registered, registered, or are exempt from registration to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

#### Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Listed in Regulation: Not applicable

ABM (Algemene Beoordelingsmethodiek): Please contact our product stewardship specialist via the Customer Information contact details in Section 1 for information on the assessment of substances and preparations within the context of the implementation of the water discharge policy.

### 15.2 Chemical safety assessment

Not applicable

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## SECTION 16: OTHER INFORMATION

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### Product Literature

Additional information on this and other products may be obtained by visiting our web page.

### Revision

Identification Number: 48286 / A715 / Issue Date: 16.10.2018 / Version: 1.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

|         |                                  |
|---------|----------------------------------|
| Dow IHG | Dow Industrial Hygiene Guideline |
| TWA     | Time Weighted Average (TWA):     |

### Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

#### Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

SPECIALTY ELECTRONIC MATERIALS SWITZERLAND GMBH urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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