Material Safety Data Sheet
Aquacoat® ECD Ethylcellulose Aqueous Dispersion

This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 And Canadian Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name  Aquacoat® ECD Ethylcellulose Aqueous Dispersion
Synonyms  Cellacefate; Cellulose Acetate Phthalate
Chemical Family  Cellulose Derivative, Surfactant
Recommended use:  Pharmaceutical excipient.

Manufacturer  FMC Corporation
1735 Market Street
Philadelphia, PA 19103
(800) 526-3649
msdsinfo@fmc.com

Emergency telephone number  1 302 / 451-0100 (FMC Plant - Newark, Delaware)
(303) 595-9048 (Medical - U.S. - Call Collect)
For leak, fire, spill, or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A. & Canada)
1 703 / 527 3887 (CHEMTREC - All Other Countries - Collect)

2. HAZARDS IDENTIFICATION

Emergency Overview  The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance  White,
Physical state  Liquid
Odor  Low, characteristic
Eyes  May cause slight irritation,
Skin  Does not pose a potential of skin irritation and sensitization.
Inhalation  No known hazard by inhalation.
Ingestion  Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic effects  No known effect based on information supplied.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylcellulose</td>
<td>9004-57-3</td>
</tr>
<tr>
<td>Cetyl Alcohol</td>
<td>36653-82-4</td>
</tr>
<tr>
<td>Sodium Lauryl Sulfate</td>
<td>151-21-3</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
</tbody>
</table>
Aquacoat® ECD Ethylcellulose Aqueous Dispersion

4. FIRST AID MEASURES

Eye contact  
Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.

Skin contact  
Wash with water and soap as a precaution.

Inhalation  
Move to fresh air. Get medical attention immediately if symptoms occur.

Ingestion  
Do not induce vomiting without medical advice. Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically.

Protection of first-aiders  
Use personal protective equipment.

5. FIRE-FIGHTING MEASURES

Flash Point  
No information available.

Suitable extinguishing media  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical  
None in particular.

Protective equipment and precautions for firefighters  
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA  
Health Hazard 0  
Flammability 1  
Stability 0  
Special Hazards -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions  
For personal protection see section 8.

Methods for containment  
Dike to collect large liquid spills

Methods for cleaning up  
Soak up with inert absorbent material. Clean contaminated surface thoroughly. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling  
Wear personal protective equipment. In case of insufficient ventilation, wear suitable respiratory equipment if release of airborne dust is expected. Refer to Section 8.

Storage  
Keep container tightly closed. Keep from freezing. Store refrigerated at 5°C (41°F). Keep away from heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure guidelines  
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Aquacoat® ECD Ethylcellulose Aqueous Dispersion

**Occupational exposure controls**

**Engineering measures**
Use with local exhaust ventilation.

**Personal Protective Equipment**

**General Information**
If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

**Respiratory protection**
In case of inadequate ventilation wear respiratory protection.

**Eye/face protection**
Safety glasses

**Skin and body protection**
No special precautions required

**Hand protection**
No special precautions required

9. **PHYSICAL AND CHEMICAL PROPERTIES**

- **Appearance**: White
- **Physical state**: Liquid
- **Odor**: Low, characteristic
- **Odor Threshold**: No information available
- **pH**: 4-7
- **Melting Point/Range**: Not applicable
- **Freezing point**: No information available
- **Boiling Point/Range**: 100 °C / 212 °F
- **Flash Point**: No information available
- **Evaporation rate**: not determined
- **Autoignition Temperature**: No information available
- **Vapor pressure**: Not applicable
- **Vapor density**: No information available
- **Density**: No information available
- **Specific Gravity**: 1.03
- **Bulk density**: No information available
- **Water solubility**: Insoluble in water
- **Percent volatile**: No information available
- **Partition coefficient**: Not applicable
- **Viscosity**: No information available
- **Oxidizing properties**: Not applicable

10. **STABILITY AND REACTIVITY**

- **Stability**: Stable.
- **Conditions to avoid**: None known
- **Hazardous decomposition products**: None known.
- **Hazardous polymerization**: Hazardous polymerization does not occur.

11. **TOXICOLOGICAL INFORMATION**

- **Skin contact**: Does not pose a potential of skin irritation and sensitization.
- **Eye contact**: Non-irritating (Rabbit).
- **Inhalation**: No known hazard by inhalation.
Ingestion
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

LD50 Oral  > 5000 mg/kg (Rat)
LD50 Dermal > 2000 mg/kg (rabbit)
LC50 Inhalation > 5.21 mg/L (Rat) (4-hr) - Maximum attainable concentration (zero mortality)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cetyl Alcohol</td>
<td>= 5 g/kg  (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium Lauryl Sulfate</td>
<td>= 977 mg/kg (Rat)</td>
<td>= 580 mg/kg (Rabbit)</td>
<td>&gt; 3900 mg/m³ (Rat) 1 h</td>
</tr>
</tbody>
</table>

Chronic Toxicity
No chronic data available on the aqueous formulation. Information presented (with the exception of sensitization data) is on the dry basis. Product does not present a chronic toxicity hazard based on known or supplied information.

Carcinogenicity
Contains no ingredient listed as a carcinogen.

Sensitization
Did not cause sensitization on laboratory animals: guinea pig.

Mutagenicity
In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects.

Teratogenicity
Not teratogenic in animal studies.

Target Organ Effects
None noted in chronic animal studies.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects
The environmental impact of this product has not been fully investigated. Not expected to have significant environmental effects.

Environmental Fate

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<tr>
<th>Chemical Name</th>
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<tr>
<td>Cetyl Alcohol</td>
<td>6.65</td>
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<tr>
<td>Sodium Lauryl Sulfate</td>
<td>1.6</td>
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Persistence and degradability
No data is available on the product itself.

Bioaccumulation
Bioaccumulation is unlikely.

Mobility
No information available.

Other adverse effects
None known

13. DISPOSAL CONSIDERATIONS

Waste disposal methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging
Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT
not regulated
Aquacoat® ECD Ethylcellulose Aqueous Dispersion

**TDG**
- not regulated

**ICAO/IATA**
- not regulated

**IMDG/IMO**
- not regulated

## 15. REGULATORY INFORMATION

### International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA Inventory (United States of America)</th>
<th>DSL (Canada)</th>
<th>EINECS/E LINCS (Europe)</th>
<th>ENCS (Japan)</th>
<th>IECSC (China)</th>
<th>KECL (Korea)</th>
<th>PICCS (Philippines)</th>
<th>AICS (Australia)</th>
<th>NZIoC (New Zealand)</th>
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### U.S. FEDERAL REGULATIONS

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**
- **Acute Health Hazard**
  - no
- **Chronic Health Hazard**
  - no
- **Fire Hazard**
  - no
- **Sudden Release of Pressure Hazard**
  - no
- **Reactive Hazard**
  - no

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### International Regulations

**Mexico - Grade**
- No information available

**Canada**
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**
- Non-controlled
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Stability</th>
<th>Special precautions</th>
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<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>0</td>
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NFPA/HMIS Ratings Legend
Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Revision Date: 2014-06-12
Reason for revision: No information available.

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End of Material Safety Data Sheet