

MATERIAL SAFETY DATA SHEET

Aquacoat® ECD Ethylcellulose Aqueous Dispersion

FMC BioPolymer

MSDS Ref. No.: F10-50-4
Date Approved: 01/31/2008
Revision No.: 16

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Aquacoat® ECD Ethylcellulose Aqueous Dispersion
CHEMICAL FAMILY: Cellulose Derivative; Alcohol, Surfactant
SYNONYMS: Ethylcellulose Aqueous Dispersion; Aqueous Polymeric Dispersion; Ethylcellulose Dispersion
ALTERNATE PRODUCT NAME(S): Aquacoat® ECD-30

MANUFACTURER

FMC BioPolymer
1735 Market Street
Philadelphia, PA 19103
(800) 526-3649 (General Information)
msdsinfo@fmc.com (Email - General Information)

FMC Europe NV
Avenue Mounier 83
1200 Brussels, Belgium
353 21 435 4133 (General Information - Cork, Ireland)

EMERGENCY TELEPHONE NUMBERS

(302) 451-0100 (FMC Plant - Newark, Delaware)
(303) 595-9048 (Medical - U.S. - Call Collect)

For leak, fire, spill, or accident emergencies, call:
(800) 424-9300 (CHEMTREC - U.S.A. & Canada)
(703) 527-3887 (CHEMTREC - Collect - All Other Countries)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

- White liquid with a faint, characteristic odor.
- Do not expose to temperatures above 35°C (95°F)
- Not expected to be toxic to the environment, nor to aquatic organisms.

POTENTIAL HEALTH EFFECTS: Mildly irritating to the skin and eyes.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt. %	EC No.	EC Class
Ethylcellulose	9004-57-3		None	Not classified
Cetyl Alcohol	36653-82-4		253-149-0	Not classified
Sodium Lauryl Sulfate	151-21-3		205-788-1	Not classified
Water	7732-18-5		231-791-2	Not classified

4. FIRST AID MEASURES

EYES: Flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Drink plenty of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

NOTES TO MEDICAL DOCTOR: This product has low oral, dermal and inhalation toxicity. It is mildly irritating to the eyes and skin, and non-sensitizing to the skin. Treatment is symptomatic and supportive.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water

FIRE / EXPLOSION HAZARDS: No known hazard

FIRE FIGHTING PROCEDURES: For fires involving this material, do not enter any enclosed or confined fire space without wearing full protective clothing and self-contained breathing apparatus (SCBA) approved for firefighting. This is necessary to protect against the hazards of heat, products of combustion and oxygen deficiency. Closed containers may pressurize and burst in a fire. Do not breathe smoke, gases or vapors generated.

FLAMMABLE LIMITS: Not applicable

6. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: Mop up the spilled material and dispose of in accordance with the waste disposal method outlined in Section 13, "Disposal Considerations" below. Refer to Section 8 "Exposure Controls / Personal Protection" for appropriate personal protective equipment.

7. HANDLING AND STORAGE

HANDLING AND STORAGE: Use only in systems, processes and procedures for which effective ventilation has been provided. Always use safe lifting techniques when manually moving containers, especially when handling containers weighing more than 50 pounds (22.7 kg). Maintain adequate clearance from structural members and sprinklers. NFPA and U.S. OSHA state a minimum of 18 inches (45.7 cm) clearance shall be maintained between the top of storage and the ceiling sprinkler deflectors.

Keep tightly closed. Store at approximately 22°C (72°F). Protect from freezing. Do not expose to temperatures above 35°C (95°F). Expiration date: 2 years after manufacture. Keep material out of lakes, streams, ponds and sewer drains.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Appropriate protective eyewear, such as goggles or glasses with side shields, should be worn to prevent eye contact.

RESPIRATORY: Whenever vapors or mist, in the worker's breathing zone, cannot be controlled with ventilation, workers should wear respirators that are approved for protection against splash, spray or mist exposure (by U.S. NIOSH/MSHA, EU CEN or comparable certification organization).

PROTECTIVE CLOTHING: No special clothing is required.

GLOVES: No special gloves are required.

COMMENTS:

EXPOSURE LIMITS:

Particulates Not Otherwise Classified (PNOC):

ACGIH/TWA

10 mg/m³ (inhalable particulate)

3 mg/m³ (respirable particulate)

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:	Faint, characteristic
APPEARANCE:	White liquid
AUTOIGNITION TEMPERATURE:	Not applicable
BOILING POINT:	100 °C (212 °F)
COEFFICIENT OF OIL / WATER:	Not applicable
EVAPORATION RATE:	Not applicable (Butyl Acetate = 1)
FAT SOLUBILITY:	Not applicable
FLASH POINT:	Not applicable
MELTING POINT:	Not applicable
OXIDIZING PROPERTIES:	Not applicable
PERCENT VOLATILE:	Approximately 70% water, by weight
pH:	4 - 7
SOLUBILITY IN WATER:	Insoluble
SPECIFIC GRAVITY:	1.03 (water = 1)
VAPOR DENSITY:	Not applicable
VAPOR PRESSURE:	Not applicable

COMMENTS:

EXPLOSIVE PROPERTIES: Not applicable

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	None known
STABILITY:	Stable
HAZARDOUS DECOMPOSITION PRODUCTS:	None known.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Mildly irritating (rabbit)

SKIN EFFECTS: Mildly irritating (rabbit)

DERMAL LD₅₀: > 2,000 mg/kg (rabbit)

ORAL LD₅₀: > 5,010 mg/kg (rat)

INHALATION LC₅₀: > 2.05 mg/l (4 h) (rat) Maximum attainable concentration - zero mortality

SENSITIZATION: (Skin) Non-sensitizing (guinea pig)

ACUTE EFFECTS FROM OVEREXPOSURE: This product has low oral, dermal and inhalation toxicity. It is mildly irritating to the eyes and skin. It is non-sensitizing to the skin. No other significant acute toxicological effects expected.

CHRONIC EFFECTS FROM OVEREXPOSURE: In a 90-day oral study in rats, increases in liver enzymes were observed. The No Observed Effect Level (NOEL) was 3 mL/kg/day (903 mg/kg/day). There were no teratogenic effects noted in offspring of rats treated orally up to 15 mL/kg/day (4,515 mg/kg/day). This product was not genotoxic when tested in both the in vitro and in vivo standard assays.

CARCINOGENICITY:

NTP:	Not listed
IARC:	Not listed
OSHA:	Not listed
OTHER:	(ACGIH) Not listed

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No data available for the formulation. The components of this formulation are not expected to have significant environmental effects.

ECOTOXICOLOGICAL INFORMATION: No data available for the formulation. No significant effects on aquatic organisms expected.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: 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

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

PROPER SHIPPING NAME: National Motor Freight Classification Item 149980, Paint and related material.

ADDITIONAL INFORMATION: Not listed in Title 49 of the U.S. Code of Federal Regulations as a hazardous material.

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

ADDITIONAL INFORMATION: Not regulated

ADR - EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD

ADDITIONAL INFORMATION: Not regulated

INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) / INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

ADDITIONAL INFORMATION: Not regulated

OTHER INFORMATION:

MARPOL Designation : None

Canada (TDG) : Not applicable

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A):

None

SECTION 311 HAZARD CATEGORIES (40 CFR 370):

None

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370):

The Threshold Planning Quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs; however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.:

None

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):

This product does not contain any toxic chemicals subject to the reporting requirements of Section 313, Title III of the SARA (Superfund Amendments and Reauthorization Act) of 1986.

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA DESIGNATION & REPORTABLE QUANTITIES (RQ) (40 CFR 302.4):

None

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA INVENTORY STATUS (40 CFR 710):

Not applicable

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):

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

Hazard Classification / Division: D2B

Domestic Substance List: Listed (components)

INTERNATIONAL LISTINGS

Ethylcellulose

Australia (AICS): Listed

China: Listed

Japan (ENCS): (8)-186

Korea: KE-13689

Philippines (PICCS): Listed

Cetyl alcohol
 Australia (AICS): Listed
 China: Listed
 Japan (ENCS): (2)-217; (2)-3704
 Korea: KE-18460
 Philippines (PICCS): Listed

Sodium lauryl sulfate
 Australia (AICS): Listed
 China: Listed
 Korea: KE-21884
 Philippines (PICCS): Listed

Water
 Australia (AICS): Listed
 China: Listed
 Korea: KE-35400
 Philippines (PICCS): Listed

HAZARD, RISK AND SAFETY PHRASE DESCRIPTIONS:

EC Symbols: (Not classified as hazardous)

EC Risk Phrases: (Not classified as hazardous)

EC Safety Phrases: (Not classified as hazardous)

16. OTHER INFORMATION

NEPA

Health	0
Flammability	0
Reactivity	0
Special	None

No special requirements

NEPA (National Fire Protection Association)

Degree of Hazard Code:

- 4 = Extreme
- 3 = High
- 2 = Moderate
- 1 = Slight

0 = Insignificant

REVISION SUMMARY:

This MSDS replaces Revision #15, dated November 5, 2005.

Changes in information are as follows:

Section 1 (Product and Company Identification)

Section 15 (Regulatory Information)

Section 16 (Other Information)

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