



SAFETY DATA SHEET

CELL-O-FILL

SECTION 1: IDENTIFICATION

GHS PRODUCT IDENTIFIERS:

PRODUCT NAME: MAS Epoxies Cell-O-Fill
SYNONYMS, TRADE NAMES: MAS Cell-O-Fill, Filler
OTHER MEANS OF IDENTIFICATION: Not available

RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE:

USES: Polymer Matrix For Fiber-Reinforced Plastic (FRP)
RESTRICTIONS ON USE: None Identified

SUPPLIER'S DETAILS:

MANUFACTURER/SUPPLIER: Endurance Technologies, Inc.
275 Bridge Point Drive
South Saint Paul, MN 55075, USA
TELEPHONE: +1 651 451 8000
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CONTACT PERSON: Eric Frank

EMERGENCY PHONE NUMBER:

CHEMTREC (24 HRS): USA 1 800 424 9300
CHEMTREC (24 HRS): INTERNATIONAL +1 703 527 3887

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF SUBSTANCE OR MIXTURE:

Acute toxicity, Dermal: Category 5, H313

GHS LABEL ELEMENTS:

HAZARD SYMBOLS: None
SIGNAL WORDS: Warning
HAZARD STATEMENTS: H313 May be harmful in contact with skin.

PRECAUTIONARY STATEMENTS:

PREVENTION: P264 Wash hands thoroughly after handling.
P280 Wear protective gloves, clothing, and eye/face protection.
RESPONSE: P301+P312 IF SWALLOWED: Call POISON CENTER and/or doctor if you feel unwell.
P312 Call a POISON CENTER if you feel unwell
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P304+P312 IF INHALED: Call POISON CENTER if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical attention.
P308+P313 IF exposed or concerned: Get medical attention.
P391 Collect spillage.
STORAGE: P403+P233 Store in a well-ventilated place. Keep container tightly closed.



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DISPOSAL: P501 Dispose of contents and containers in accordance with local, regional and international regulations.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS) – Annex III

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME:	CAS NUMBER:	CONTENT:
Cellulose	9004-34-6	100%

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

SECTION 4: FIRST-AID MEASURES

DESCRIPTION OF NECESSARY FIRST-AID MEASURES:

INHALATION: If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical attention if breathing difficulties continue.

SKIN: Remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the material remains (at least 15-20 minutes). Launder clothing before reuse. Get medical attention if symptoms occur.

EYES: Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. Seek medical attention if irritation develops or persists.

INGESTION: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention if you feel unwell.

MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE AND DELAYED:

SYMPTOMS: Irritation. Pre-existing skin problems and respiratory conditions may be aggravated by prolonged or repeated contact. See section 11 for additional information.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:

TREATMENT: Treat symptomatically and eliminate over exposure.

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:

SUITABLE: Use water spray, alcohol resistant foam, dry chemical or carbon dioxide. Any "C" class.

UNSUITABLE: None known.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

UNUSUAL FIRE & EXPLOSION HAZARDS: Depending on the moisture content and particulate diameter, cellulose dust may explode in the presence of an ignition source. An airborne concentration of 40 grams of dust per cubic meter of air is often used as the LEL for cellulose dusts.

HAZARDOUS COMBUSTION PRODUCTS: Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous decomposition products for additional information.



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SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: Wear self-contained breathing apparatus (SCBA) equipped with a full face piece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations. See section 9 for additional information.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Eliminate ignition sources. Personal Protective Equipment must be worn. Avoid dust formation. Avoid breathing dust.

ENVIRONMENTAL PRECAUTIONS: Do not flush product into public sewer, water systems or surface waters.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Wear proper personal protective clothing and equipment. Pick up and arrange disposal without creating dust. Sweep up and shovel. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Use under well-ventilated conditions. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Avoid eye and skin contact. Avoid inhalation of aerosol, mist, spray, fume, vapor or dust generated by this product. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing and shoes before reuse.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Keep away from heat, sparks and open flames. Store dry at 15-40°C under well-ventilated conditions. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Empty container contains residual product which may exhibit hazards of product. Do not reuse empty container without commercial cleaning or reconditioning. Cellulose dust has a strong to severe explosion hazard if a dust "cloud" contains an ignition source. Refer to NFPA 664 & NFPA 68 for additional safe handling requirements.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS:

INGREDIENT NAME	CAS NUMBER	OSHA-TWA	OSHA-TWA
Cellulose	9004-34-6	5 mg/m ³ (respirable dust fraction)	15 mg/m ³ (total dust)

APPOPRIATE ENGINEERING CONTROLS: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist, vapors and dust away from workers to prevent routine inhalation. Ventilation must be adequate to maintain air concentrations below occupational exposure standards. When necessary use mechanical handling to reduce human contact with materials. If necessary, use local exhaust ventilation and process enclosure to control airborne dust.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT (PPE):



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EYE/FACE PROTECTION:	Safety glasses or goggles required. In extremely dusty environments wear unvented or indirectly vented goggles. Contact lenses should not be worn when working in extremely dusty environments.
SKIN PROTECTION:	Wear chemical resistant (impervious) gloves; PVC, neoprene, nitrile rubber, EVAL, butyl rubber. Wear chemical resistant protective clothing. Use good laboratory/ workplace procedures including personal protective clothing: lab coat and protective gloves.
RESPIRATORY PROTECTION:	Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume, vapors or dust exceed the applicable exposure limit(s) of any chemical substance listed in this SDS.
GENERAL PROTECTION:	Eyewash fountains and safety showers are recommended in the work area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Fibrous powder	UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	Not available
COLOR:	White	VAPOUR PRESSURE:	Not applicable
ODOUR:	Not available	VAPOUR DENSITY:	Not applicable
ODOUR THRESHOLD:	Not available	RELATIVE DENSITY:	0.5
PH:	7.0	SOLUBILITY(IES):	Insoluble
MELTING POINT/ FREEZING POINT	Not applicable	PARTITION COEFFICIENT (n-octanol/water):	Not available
INITIAL BOILING POINT AND BOILING RANGE:	Not applicable	AUTO-IGNITION TEMPERATURE:	230°C
FLASH POINT:	Not applicable	DECOMPOSITION TEMPERATURE:	Not available
EVAPORATION RATE:	Not applicable	VISCOSITY:	Not applicable
FLAMMABILITY (SOLID, GAS):	Not available	CHAR POINT:	180°C

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY: Not applicable.

CHEMICAL STABILITY: Stable under conditions of normal storage and use.

POSSIBILITY OF HAZARDOUS REACTIONS: Will not occur

CONDITIONS TO AVOID: Incompatible materials, excessive heat and ignition sources.

INCOMPATIBLE MATIERALS: Avoid contact with oxidizing agents and drying oils. Avoid open flame. Product may ignite at temperatures in excess of 212°F.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal-oxidative degradation of wood produces irritating and toxic fumes and gases, including CO, aldehydes and organic acids.

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE: Eyes, skin, inhalation and ingestion.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMCIAL AND TOXICOLOGICAL CHARACTERISTICS:

EYES: May cause eye irritation.

SKIN: May cause skin irritation. May be harmful in contact with skin



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INHALATION: May be harmful if inhaled. May cause respiratory tract irritation.

INGESTION: May be harmful if swallowed.

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE: Further information is not available.

ACUTE TOXICITY:

CHEMICAL NAME	LC ₅₀ INHALATION	LD ₅₀ ORAL (RAT)	LD ₅₀ DERMAL (RABBIT)
Cellulose	Not available	>5,000 mg/kg	>2,000 mg/kg

CORROSION / IRRITATION / SENSITIZATION INFORMATION:

SKIN CORROSION/IRRITATION: Information is not available.

SERIOUS EYE DAMAGE/IRRITATION: Information is not available.

RESPIRATORY OR SKIN SENSITIZATION: Information is not available.

CARCINOGENICITY / MUTAGENICITY / REPRODUCTIVE TOXICOLOGY INFORMATION:

GERM CELL MUTAGENICITY: Information is not available.

CARCINOGENICITY: Information is not available.

REPRODUCTIVE TOXICITY: Information is not available.

SPECIFIC TARGET ORGAN TOXICITY (STOT):

STOT-SINGLE EXPOSURE: Information is not available.

STOT-REPEATED EXPOSRE: Information is not available.

ASPIRATION HAZARD: Information is not available.

OTHER INFORMATION: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC, ACGIH, NTP or OSHA.

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY:

Chemical Name	LC ₅₀ 96 Hours (Fish)	EC ₅₀ 24 Hours (Daphnia)	IC ₅₀ 96 Hours (Bacteria)
Cellulose	Not available	Not available	Not available

N/E = Not established (no exposure limits established for listed substances for listed country/region/organization).

PERSISTENCE AND DEGRADABILITY:

Chemical Name	OECD Derived from OECD 301F (Biodegradation Test) - 28 Days
Cellulose	Not available

BIOACCUMULATIVE POTENTIAL:

Chemical Name	Log P _{ow}	BCF	Potential
Cellulose	Not available	Not available	Not available

MOBILITY IN SOIL:

Chemical Name	Soil/Water Partition Coefficient (K _{oc})
Cellulose	Not available

OTHER ADVERSE EFFECTS: Additional information is not available



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SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate. See section 8 for recommendations on the use of personal protective equipment.

SECTION 14. TRANSPORTATION INFORMATION

UN NUMBER:

UN PROPER SHIPPING NAME: Non Regulated

TRANSPORT HAZARD CLASS:

U.S. DOT HAZARD CLASS:	Not dangerous goods
CANADA TDG HAZARD CLASS:	Not dangerous goods
EUROPE ADR/RID HAZARD CLASS:	Not dangerous goods
IMDG CODE (OCEAN) HAZARD CLASS:	Not dangerous goods
ICAO/IATA (AIR) HAZARD CLASS:	Not dangerous goods

PACKING GROUP:

ENVIRONMENTAL HAZARDS:

MARINE POLLUTANT:	No
HAZARDOUS SUBSTANCE (USA):	No

SPECIAL PRECAUTIONS FOR USER: Information is not available.

TRANSPORTING IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:

Information is not available.

LABEL FOR CONVEYANCE:

OTHER INFORMATION: For surface shipments within the United States: Not regulated.

SECTION 15. REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT IN QUESTION:

EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV – List of substances subject to authorization, Substances of very high concern	None of the components are listed.
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	None of the components are listed.

OTHER REGULATIONS: Additional information is not available.

CHEMICAL INVENTORIES:

Canadian Domestic Substances List (DSL):	Y
Canadian Non-Domestic Substances List (NDSL):	N



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European Inventory of Existing Chemical Substances (EINECS):	Y
European List of Notified Chemical Substances (ENCS):	N
U.S. Toxic Substances Control Act (TSCA):	Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory; 2) no information is available; or 3) the component has not been reviewed.

SECTION 16. OTHER INFORMATION

REVISION DATE: November 25, 2013

LEGEND:

- ACGIH: American Conference of Governmental Industrial Hygienists
- ADR/RID: European dangerous goods transport road and rail regulations
- CAS No: Chemical Abstract Service Registry Number
- DOT: Department of Transportation (U.S.)
- GHS: Globally Harmonized System of Classification and Labeling of Chemicals
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organization
- IMDG: International Maritime Dangerous Goods code
- OEL: Occupational Exposure Limits
- OSHA: Occupational Safety and Health Administration (U.S.)
- PEL: Permissible Exposure Limit
- RQ: Reportable Quantity
- SDS: Safety Data Sheet
- STEL: Short Term Exposure Limit (15 minute Time Weighted Average)
- TDG: Canadian Transportation of Dangerous Goods Act and Regulations
- UN: United Nations
- U.S.: United States

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