



MATERIAL SAFETY DATA SHEET

MSDS-0169
LMF Series
REV. DATE: 3/5/93

SECTION 1 - IDENTIFICATION

PRODUCT (TRADE) NAME: OMEGALUX Fiber Hardening Agent

CHEMICAL FAMILY: Ethylene Glycol

SUPPLIER: OMEGA ENGINEERING INC.
PO BOX 4047
STAMFORD, CT 06907DATE PREPARED: 8/23/88
SUPERSEDES: None

TELEPHONE: (203) 359-1660

SECTION 2 - PRODUCT INFORMATION

Trade Name: Rigidizer W
CAS Number: Mixture
Synonym(s): NA
Chemical Family: NA
Molecular Formula: NA
Molecular Weight: NA
Product Code: NA
Hierarchy: NA

The mixture or trade name product covered by the MSDS contains a chemical or chemicals subject to reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Chemical Name	CAS Number	Percent by Weight
Ethylene Glycol	107-21-1	5 - 10

SECTION 3 - PRODUCT HAZARD SUMMARY

Health: May be harmful if swallowed or inhaled. May be irritating to the skin, eyes and respiratory tract.

Flammability: Non-combustible

Reactivity: Stable

SECTION 4 - PRODUCT HEALTH HAZARD INFORMATION

Effects of Overexposure:

Ingestion: May cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea.

Skin: Slightly to moderately irritating. Repeated or prolonged skin contact may cause reddening, itching and inflammation.

ND = No Data NA = Not Applicable



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SECTION 3 - PRODUCT HAZARD SUMMARY (CONT)

Eye: Slightly to moderately irritating. May cause slight transient irritation.

Inhalation: May cause respiratory tract irritation. Repeated or prolonged breathing of particles of respirable size may cause inflammation of the lung leading to chest pain, difficult breathing, coughing and possible fibrotic change in the lung—"Pneumoconiosis". Pre-existing medical conditions may be aggravated by exposure; specifically, bronchial hyper-reactivity and chronic bronchial or lung disease.

Special Toxic Effects: May cause adverse reproductive effects, based on tests with animals.

SECTION 5 - FIRST AID

Ingestion: Do not induce vomiting. If victim is conscious, give 1-3 glasses of water or milk to dilute stomach contents. If spontaneous vomiting occurs, monitor for breathing difficulty. Get immediate medical attention.

Skin Contact: Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists.

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

Inhalation: Remove affected person from source of exposure. If not breathing, ensure open airway and institute cardiopulmonary resuscitation (CPR). If breathing is difficult, administer oxygen if available. Keep affected person warm and at rest. Get immediate medical attention.

SECTION 6 - NOTES TO PHYSICIAN

Even small quantities of ingested ethylene glycol are reason for extreme medical concern. Do not wait for symptoms to develop. The lethal dose for humans is about 3-4 ounces, or 1.4 ml/kg body weight. Symptoms are usually delayed 1 to 2 hours after ingestion. Treatments should consider gastric lavage or emesis, administration of oxygen or artificial respiration, copious fluid intake in absence of renal impairment, administration of specific antidotes and supportive treatment for shock, acidosis, uremia and pulmonary edema. Early administration of ethanol may counter toxic effects. Blood ethanol levels of 100 mg/dl or higher are required to saturate the liver enzyme, alcohol dehydrogenase. Also, calcium gluconate may be administered to precipitate and reduce toxic metabolite, oxalic acid. Consult standard literature for specific treatments.

SECTION 7 - PERSONAL PROTECTION INFORMATION

Eye Protection: Wear safety glasses or chemical goggles to prevent eye contact. Do not wear contact lenses when working with this substance. Have eye washing facilities readily available where eye contact can occur.

Skin Protection: Wear impervious gloves and protective clothing to prevent skin contact. Use good personal hygiene. Wear regularly cleaned work clothing. Showering and changing into street clothing after work is desirable.

Respiratory Protection: Use NIOSH or MSHA approved equipment when airborne exposure limits are exceeded. NIOSH/MSHA approved breathing equipment may be required for non-routine and emergency use. Ventilation may be used to control or reduce airborne concentrations.



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SECTION 8 - PHYSICAL PROPERTIES

Boiling Point:	NA
Specific Gravity:	ND
Melting Point:	ND
% Volatile:	NA
Vapor Pressure:	NA
Evaporation Rate (Water = 1):	NA
Vapor Density (AIR = 1):	NA
Viscosity:	NA
% Solubility in Water:	NA
Pour Point:	NA
pH:	NA
Appearance/Odor:	Odorless clear to opalescent liquid.

SECTION 9 - FIRE AND EXPLOSION DATA

Flash Point:	NA			
Autoignition Temperature:	NA			
Flammability Limits in Air (% by Vol.):	Lower:	ND	Upper:	ND

Basic Firefighting Procedures: Use extinguishing agent suitable for type of surrounding fire. Material itself burns with difficulty.

Unusual Fire and Explosion Hazards: NA

SECTION 10 - REACTIVITY DATA

Stability/Incompatibility: Stable under normal conditions of use.

Hazardous Reactions/Decomposition Products: Incompatible with hydrofluoric acid and caustics.

SECTION 11 - ENVIRONMENTAL INFORMATION

Spill or Release to the Environment: No special procedures are required for clean-up of spills or leaks of this material. Avoid methods that result in water pollution. Caution should be exercised regarding personal safety and exposure to the spilled material, as set forth elsewhere in this data sheet.

Waste Disposal: This substance, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however it could be hazardous if it is considered toxic, corrosive, ignitable, or reactive according to Federal definitions (40 CFR 261). Additionally, it could be designated as hazardous according to state regulations. This substance could also become a hazardous waste if it is mixed with or comes in contact with a hazardous waste. If such contact or mixing may have occurred, check 40 CFR 261 to determine whether it is a hazardous waste. If it is a hazardous waste, regulations at 40 CFR 262, 263, and 264 apply. The transportation, storage, treatment, and disposal of this waste material must be conducted in compliance with all applicable Federal, state, and local regulations.

Additional Environmental Regulatory Information: There may be specific regulations at the local, regional or state level that pertain to this material.

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SECTION 12 - SPECIAL PRECAUTIONS/SUPPLEMENTAL INFORMATION

Handling/Storage: Carbon monoxide, carbon dioxide, oxides of nitrogen, reactive hydrocarbons and a small amount of formaldehyde may accompany binder burnoff during first heat. Use adequate ventilation or other precautions to eliminate vapors resulting from binder burnoff. Exposure to burnoff fumes may cause respiratory tract irritation, bronchial hyper-reactivity and asthmatic response.

SECTION 13 - TRANSPORTATION REQUIREMENTS

D.O.T. Hazard Class (49 CFR 172.101): NA
D.O.T. Proper Shipping Name (49 CFR 172.101): NA
D.O.T. Labels Required (49 CFR 172.101): NA
D.O.T. Placards Required: NA
Bill of Lading Description: ND
UN/NA Code: NA

SECTION 14 - INGREDIENTS/HEALTH HAZARD INFORMATION

Component	CAS No.	%	Exposure Limits - Reference
Inorganic material (amorphous)**			20 mppcf (6 mg/H3) PEL (OSHA) 5 mg/M3 (resp.); 10 mg/M3 intended TLV (ACGIH 1984-85)
Ethylene glycol	107-21-1	5-10	50 ppm (125 mg/M3) Vapor CL (ACGIH 1987-88)

Health Hazards: Ethylene glycol may be harmful or fatal if swallowed or inhaled and is irritating to the skin, eyes and respiratory tract. Primary toxic effect is kidney damage. Ethylene glycol may also cause brain, liver, spleen and lung damage, blood changes, harmful central nervous system effects and is a reproductive hazard based on tests with animals.

Wetting agent**	NA
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Remaining components not determined hazardous and/or hazardous components present at less than 1.0% (0.1% for carcinogens).	NA	Trace	NA
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**Identity, CAS Numbers and/or percent composition are trade secret.

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