

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : EFI POLYMERS EPOXY RESIN 29-87R
 IDENTIFICATION NUMBER: 29-87R
 PRODUCT USE/CLASS : Epoxy resin

SUPPLIER:

efi Polymers
 3875 Steele Street, Unit E
 Denver, CO 80205
 EMERGENCY: 800-255-3924 Chem-Tel
 INFORMATION: 303-333-1876
 PREPARER: Cathy Griffith, PHONE: 303-333-1876, PREPARE DATE: 03/22/04

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%
01	2-Ethylhexyl Glycidyl Ether	2461-15-6	1.0-20.0
02	Epoxy resin	TRADE SECRET	60.0-100.0

ITEM	EXPOSURE LIMITS				COMPANY TLV-TWA	SKIN
	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING		
01	N.E.	N.E.	N.E.	N/E	N.E.	NO
02	N.E.	N.E.	N.E.	N/E	N.E.	NO

(See Section 16 for abbreviation legend)

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Harmful if swallowed. Causes skin irritation. May cause allergic skin reaction. Causes eye irritation.

ACUTE EFFECTS - EYE CONTACT: Moderately irritating to the eyes. Contact may cause redness, tearing, and swelling. No permanent injury likely.

ACUTE EFFECTS - SKIN CONTACT: May cause allergic skin reaction. Moderate irritant. Prolonged contact may cause dermatitis.

ACUTE EFFECTS - INHALATION: Vapors and/or aerosols formed at elevated temperatures can be irritating.

ACUTE EFFECTS - INGESTION: Irritating to mouth, throat and stomach, with nausea.

CHRONIC OVEREXPOSURE EFFECTS: *Preexisting pulmonary and dermatological disorders may be aggravated by exposure to hazardous components.

OTHER INFORMATION: No information.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT, INHALATION, EYE CONTACT,

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SECTION 4 - FIRST AID MEASURES

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EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

INHALATION: If symptoms occur, remove to fresh air. Medical personnel may administer oxygen if breathing is difficult. Seek medical attention if symptoms persist.

INGESTION: Swallowing less than an ounce will not cause significant harm. For larger amounts, do not induce vomiting, but give one or two glasses of water to drink and get medical attention.

NOTES TO PHYSICIAN: Treat symptomatically.

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SECTION 5 - FIRE FIGHTING MEASURES

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FLASH POINT: 480 F	LOWER EXPLOSIVE LIMIT: N.A.
(PENSKY-MARTENS C.C.)	UPPER EXPLOSIVE LIMIT: N.A.
AUTOIGNITION TEMPERATURE: No data	

EXTINGUISHING MEDIA: CO2, DRY CHEMICAL, FOAM, WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture or explode (due to pressure build-up) when exposed to extreme heat. Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.

SPECIAL FIREFIGHTING PROCEDURES: Use NIOSH-approved self-contained breathing apparatus and full protective clothing. Use water to cool exposed containers. Water stream directed into fire may cause frothing with subsequent spread of flame.

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SECTION 6 - ACCIDENTAL RELEASE MEASURES

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Reclaim clean material. Wear appropriate protective equipment during cleanup. Absorb with inert material, such as clay. Sweep or shovel into loosely-covered waste container and remove to appropriate waste area. Dispose of in accordance with federal, state, and local regulations.

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SECTION 7 - HANDLING AND STORAGE

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HANDLING: Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid contact with eyes, skin, and clothing. FOR INDUSTRIAL USE ONLY.

STORAGE: Store in a cool dry place. Keep container closed when not in use.

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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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ENGINEERING CONTROLS: Local exhaust as needed to control vapor or dust levels to below lowest component TLV.

RESPIRATORY PROTECTION: If TLV/PEL is exceeded, if use is performed in a poorly-ventilated space, or if inhalation effects occur, use NIOSH-approved vapor cartridge respirator in accordance with applicable health and safety regulations and manufacturer's recommendations.

SKIN PROTECTION: Butyl rubber gloves. Neoprene gloves. Nitrile gloves. Supported PVA gloves.

EYE PROTECTION: Chemical splash goggles.

OTHER PROTECTIVE EQUIPMENT: Accessible eye wash and safety shower.

HYGIENIC PRACTICES: Follow good general industrial safety practices during use. Do not smoke or eat during use. DO NOT reuse empty containers without commercial clean or recondition.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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BOILING RANGE	: 500 - 500 F	VAPOR DENSITY	: Is heavier than air
ODOR	: Mild nondescript	ODOR THRESHOLD	: No data
APPEARANCE	: Black	EVAPORATION RATE	: Is slower than Butyl Acetate
SOLUBILITY IN H ₂ O	: Negligible	SPECIFIC GRAVITY	: 1.144
FREEZE POINT	: No data	pH @ 100.0 %	: N/A
VAPOR PRESSURE	: <1mmHg @ 20degC	VISCOSITY	: Low
PHYSICAL STATE	: Liquid		

COEFFICIENT OF WATER/OIL DISTRIBUTION: No data
(See Section 16 for abbreviation legend)

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SECTION 10 - STABILITY AND REACTIVITY

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CONDITIONS TO AVOID: Prolonged exposure to heat.

INCOMPATIBILITY: Strong Lewis or mineral acids. Strong bases or oxidants. Reaction with amines and mercaptans in large amounts or under uncontrolled conditions releases considerable heat and may release acrid fumes.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon. Aldehydes and acids from incomplete combustion. Phenolic compounds.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

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SECTION 11 - TOXICOLOGICAL PROPERTIES

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COMPONENT TOXICOLOGICAL INFORMATION:

----- CHEMICAL NAME -----	----- LD50 -----	----- LC50 -----
2-Ethylhexyl Glycidyl Ether	No information	No information
Epoxy resin	Oral-rat=>11 g/kg	No deaths/satd air

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SECTION 12 - ECOLOGICAL INFORMATION

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ECOLOGICAL TEST DATA: No information.

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SECTION 13 - DISPOSAL CONSIDERATIONS

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DISPOSAL METHOD: Review all current federal, state, and local regulations regarding health and disposal for appropriate disposal procedures. When cured, product is non-hazardous, and may be placed in industrial or municipal landfill if local regulations permit. Landfilling of free liquid NOT recommended. Product disposed of in "as sold" condition is not considered a hazardous waste under Federal RCRA regulations. Fuels blending of free liquid recommended if permitted.

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SECTION 14 - TRANSPORTATION INFORMATION

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DOT PROPER SHIPPING NAME: Not regulated

DOT TECHNICAL NAME: N/A

DOT HAZARD CLASS: N/A

DOT UN/NA NUMBER: N/A

HAZARD SUBCLASS: N/A

PACKING GROUP: N/A RESP. GUIDE PAGE:

INTERNATIONAL SHIPPING NAME: Not considered a dangerous good for transport

INTERNATIONAL ID NUMBER: N/A

IMDG CLASS (1°,2°): N/A

IMDG EMS: N/A

IMDG PAGE NUMBER: N/A

IATA CLASS (1°,2°): N/A

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SECTION 15 - REGULATORY INFORMATION

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OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA - SARA HAZARD CATEGORY:

This product has been reviewed, and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 and 40 CFR part 372:

----- CHEMICAL NAME -----	CAS NUMBER	WT/WT % IS LESS THAN
No SARA Section 313 components exist in this product.		

TOXIC SUBSTANCES CONTROL ACT:

The chemical substances in this product are on the TSCA Section 8 Inventory.

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

----- CHEMICAL NAME -----	CAS NUMBER
Epoxy resin	25068-38-6
2-Ethylhexyl Glycidyl Ether	2461-15-6
Epoxy resin	25068-38-6

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: D2B

COMPONENT RCRA CLASSIFICATIONS: Not regulated

COMPONENT RCRA CODES: No information.

CERCLA RQ VALUE (MINIMUM): None known

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SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: none
REASON FOR REVISION: new product

VOLATILE ORGANIC COMPOUNDS (VOCS): 1 grams/ltr

LEGEND: N.A. - No information, N.E. - Not Established,
N.D. - Not Determined

ABBREVIATIONS: ACGIH = American Conference of Governmental Industrial Hygienists; OSHA = US Occupational Health and Safety Administration; UK = United Kingdom; TLV-TWA = Threshold Limit Value-Time Weighted Average (8 hrs); STEL = Short-Term Exposure Limit (15 min); C = Ceiling Value; PEL = Permissible Exposure Limit

DISCLAIMER: To the best of our knowledge, the information contained in this MSDS is accurate or is obtained from sources believed to be accurate. However, no liability, expressed or implied, is assumed for the accuracy or completeness of the information contained herein. Buyer assumes liability in its use of the material.

<END OF MSDS>