

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 EPOXY RESIN 20203
 IDENTIFICATION NUMBER: 20203
 PRODUCT USE/CLASS : Epoxy resin

SUPPLIER:

efi Polymers
 4600 Holly Street
 Denver, CO 80216
 EMERGENCY: 800-255-3924 Chem-Tel
 INFORMATION: 303-333-1876

PREPARER: Cathy Griffith, PHONE: 303-333-1876, PREPARE DATE: 07/24/06

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%
01	Carbon Black	1333-86-4	0.1-1.0
02	Substituted Glycidyl Ether	TRADE SECRET	5.0-10.0
03	Silicon dioxide (quartz)	14808-60-7	0.1-1.0
04	Epoxy resin	TRADE SECRET	30.0-60.0

EXPOSURE LIMITS

ITEM	ACGIH		OSHA		COMPANY	SKIN
	TLV-TWA	TLV-STEL	FEL-TWA	FEL-CEILING	TLV-TWA	
01	3.5 mg/m3	N.E.	3.5 mg/m3	N/E	2.5 mg/m3	NO
02	N.E.	N.E.	N.E.	N/E	N.E.	NO
03	0.025 mg/m3*	N.E.	0.05 mg/m3*	N/E	0.05 mg/m3*NIOSH	NO
04	N.E.	N.E.	N.E.	N/E	N.E.	NO

*Respirable fraction

(See Section 16 for abbreviation legend)

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Harmful if swallowed. Causes skin irritation. May cause allergic skin reaction. Contact may cause eye injury. Harmful to aquatic organisms.

ACUTE EFFECTS - EYE CONTACT: Moderately irritating to the eyes.

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

ACUTE EFFECTS - INHALATION: Dust or vapors may be slightly irritating to respiratory tract. Causes respiratory tract irritation.

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. *Repeated and prolonged inhalation of graphite or carbon dusts may cause pulmonary fibrosis, emphysema, and pneumoconiosis. the severity of these effects is greatly influenced by the presence of other harmful mineral dusts, most notably crystalline silica. *This product contains encapsulated silicon

Continued on Page 2)

Product: 20203

Preparation Date: 07/24/06

Page 3

SECTION 7 - HANDLING AND STORAGE

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.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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 H2O	: Negligible	SPECIFIC GRAVITY:	1.6211
FREEZE POINT	: No data	pH @ 100.0 %	: N/A
VAPOR PRESSURE	: No data - low	VISCOSITY	: High
PHYSICAL STATE	: Liquid		
COEFFICIENT OF WATER/OIL DISTRIBUTION: No data			
(See Section 16 for abbreviation legend)			

SECTION 10 - STABILITY AND REACTIVITY

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.

Continued on Page 4)

Product: 20203

Preparation Date: 07/24/06

Page 4

SECTION 11 - TOXICOLOGICAL PROPERTIES

COMPONENT TOXICOLOGICAL INFORMATION:

CHEMICAL NAME	LD50	LC50
Carbon Black	Oral-rat=>9 g/kg	No information
Substituted Glycidyl Ether	No information	No information
Silicon dioxide (quartz)	No information	No information
Epoxy resin	Oral-rat=>11 g/kg	No deaths/satd air

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL TEST DATA: No information.

SECTION 13 - DISPOSAL CONSIDERATIONS

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. Do not landfill free liquid. Fuels blending recommended for free liquid if regulations permit.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not regulated for transport
 DOT TECHNICAL NAME: N/A
 DOT HAZARD CLASS: N/A
 DOT UN/NA NUMBER: N/A

HAZARD SUBCLASS: NONE
 PACKING GROUP: N/A
 RESP. GUIDE PAGE:

INTERNATIONAL SHIPPING NAME: N/A
 INTERNATIONAL ID NUMBER: N/A
 IMDG CLASS (1°, 2°): N/A
 IMDG EMS: N/A

PACKING GROUP: N/A
 IATA CLASS (1°, 2°): N/A

SECTION 15 - REGULATORY INFORMATION

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 CHRONIC 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.

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
2-Ethylhexyl Glycidyl Ether	2461-15-6
Epoxy resin	25068-38-6

Continued on Page 5)

Product: 20203

Preparation Date: 07/24/06

Page 5

SECTION 15 - REGULATORY INFORMATION

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

SECTION 16 - OTHER INFORMATION

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

PREVIOUS MSDS REVISION DATE: 08/13/03
REASON FOR REVISION: revised Section(s): 2,3,6,14

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

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<END OF MSDS>