1. PRODUCT AND COMPANY IDENTIFICATION

COMMON NAME:	Epoxy Resin and Epoxy Repair Kit, Catalogue Number 40641
CHEMICAL NAME:	Butyl Glycidyl Ether, BGE, and Epoxy Resins
PRODUCT DESCRIPTION:	Butyl Glycidyl Ether and Epoxy Resins
FORMULA:	Not Available
PRODUCT CAS NO.:	Mixture
SUPPLIER:	Cooper Industries/Cooper Power Systems
ADDRESS:	3660 South School Avenue
CITY, STATE, ZIP:	Fayetteville, AR 72701
PHONE:	(479) 521-3700 **EMERGENCY PHONE: CHEMTREC (800) 924-9300**

2. HAZARDOUS INGREDIENTS: COMPOSITION/INFORMATION

INGREDIENT	% WEIGHT	PEL-OSHA	TLV-ACGIH	LD_{50}/LC_{50} ROUTE/SPECIES
Epoxy Resins CAS No.: Proprietary FORMULA: Proprietary	No Data	None Established	None Established	No Data
n-Butyl glycidyl ether (BGE) CAS No.: 2426-08-6 FORMULA: $C_7H_{14}O_2$	No Data	50 ppm	25 ppm	LC_{50}: > 3500 ppm inhalation/mouse (4 H)
Yellow pigment (Containing lead, dispersed in resin) CAS No.: Proprietary FORMULA: Proprietary	No Data	50 µg/m^3 30 µg/m^3 (action level)	0.05 mg/m^3 (as Pb)	No Data

OSHA Regulatory Status: This product is considered hazardous under criteria of this rule.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Yellow viscous liquid with irritating odor. Moderate skin and eye irritant. May cause skin sensitization. Inhalation of high concentrations may cause irritation or liver effects. May cause cancer based on animal data. Contains lead, an ingredient that can adversely affect the reproductive system and cause birth defects. Long-term inhalation or ingestion may adversely affect the liver, kidneys, blood, fetus, reproductive, nervous, and digestive systems.

POTENTIAL HEALTH EFFECTS

EYE: May cause moderate irritation, redness, swelling, and tears.

SKIN: May cause redness, irritation, and swelling. Repeated or prolonged contact may cause rashes in sensitive individuals (dermatitis).

INGESTION: May affect the nervous system causing excitement followed by depression.

INHALATION: Not expected due to low volatility. High concentrations of mists or vapors may cause respiratory irritation, liver effects or overexposure to lead (See Chronic).

SIGNS AND SYMPTOMS: CNS effects from overexposure may include nausea, headache, incoordination, and drowsiness.

CHRONIC: Due to low volatility, inhalation is not expected under normal working conditions. Repeated inhalation or ingestion from hand to mouth contamination may adversely affect the lungs, liver, kidneys, blood, nervous and digestive system, reproductive system, and fetus.

CARCINOGENICITY: IARC: Yes (2B) NTP: No OSHA: Yes
Lead is classified as possibly carcinogenic to humans by IARC (Group 2B) and regulated by OSHA under 29 CFR Part 1910.1025.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Irritant properties may aggravate pre-existing eye, skin, and respiratory disorders.

TARGET ORGANS: Eyes, skin, respiratory system. Repeated overexposure may adversely affect the liver, kidneys, blood, fetus, reproductive system, nervous system, or digestive tract.

4. FIRST AID MEASURES

EYE: Flush eyes with large amounts of lukewarm water for 15 minutes. Seek medical attention.

SKIN: Remove contaminated clothing and wash skin thoroughly with soap and water. If irritation persists, seek medical attention.

INGESTION: If significant amounts are ingested, get immediate medical attention.

INHALATION: Not expected under normal working conditions. If inhalation occurs, remove to fresh air. If breathing problems occur, administer oxygen or artificial respiration as indicated and obtain immediate medical attention.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES		
FLASH POINT:	No Data (Setaflash for BGE: 78 °C / 173 °F)	
FLAMMABLE LIMITS:	LEL: No Data	UEL: No Data
NFPA HAZARD CLASSIFICATION:		
HEALTH: 2	FLAMMABILITY: 1	INSTABILITY: 0

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam or water spray.

FIRE AND EXPLOSION HAZARDS: Container may vent rapidly or rupture violently from pressure when involved in a fire situation.

FIRE FIGHTING INSTRUCTIONS: Firefighters should wear a NIOSH-approved, full-facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear. Resin mixture may give off irritating or toxic compounds when heated to decomposition temperature. If fire is in areas where large amounts of product are stored, evacuate to a safe distance in all directions. Containers may rupture violently from pressure when involved in a fire situation. Use water spray to cool containers exposed to heat. Continue to cool containers until well after flames are extinguished.

6. ACCIDENTAL RELEASE MEASURES

Extinguish all ignition sources and isolate area of spill. Wear appropriate protective equipment (See Section 8). No smoking, sparks, or open flames in hazard area. Wipe up small spills with cloth or absorb with suitable inert sorbent material. Place in closed container for later disposal. Dike well ahead of large spills for later recycle or disposal. Pump or shovel into salvage containers.

7. HANDLING AND STORAGE

Store in cool area away from heat sources (temperature range 50-90 °F). When mixing resin with curing agent, measure ingredients carefully. Do not deviate from specified mix ratio. Thoroughly blend two parts of epoxy resin system. Heat or cool epoxy resin components to 77 °F before use. Temperatures above and below 77 °F affect pot life and cure time. Curing process is exothermic. Do not cure large amounts at once. Keep containers tightly closed when not in use. Do not use or store near heat, sparks, flames, or other ignition sources. Do not eat, drink, smoke, apply cosmetics or store personal items in work or storage areas. Use only with adequate ventilation. Do not get in the eyes or hair or on skin or clothing. Wash thoroughly after handling. Wash thoroughly after handling, before meals and breaks and before leaving the work area. Protect containers from physical damage. Store upright and prevent containers being knocked over. Empty containers may contain product residue, handle and dispose accordingly. Do not re-use empty containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Under normal working conditions below acceptable exposure guidelines, none required. Respiratory protection depends upon the magnitude of exposure and should be selected in accordance with 29 CFR Part 1910.134.

SKIN PROTECTION: Protective rubber gloves and additional chemical protective clothing as necessary to prevent contact.

EYE PROTECTION: Safety goggles or full faceshield as necessary to prevent contact.

ENGINEERING CONTROLS: General ventilation used in combination with local exhaust as necessary to control air contaminants at or below acceptable exposure guidelines.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Yellow viscous liquid
ODOR:	Irritating (BGE)
BOILING POINT:	> 107.2 °C (> 225 °F)
VAPOR PRESSURE:	Negligible
VAPOR DENSITY (Air = 1):	> 1
SOLUBILITY IN WATER:	Negligible
SPECIFIC GRAVITY (H_20 = 1):	1.60
MELTING POINT:	No Data
pH:	No Data
% VOLATILE (By volume):	0

10. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBLE MATERIALS/CONDITIONS: Incompatible with strong oxidizers, strong acids, and bases. Avoid elevated temperatures, sparks, and flame. Do not cure large mixtures in bulk.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, chlorine compounds, and other oxidation products.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

INHALATION: Focal inflammatory cells in the liver were observed in animals exposed to BGE vapors (concentration not stated). An eight-hour LC_{50} of 670 ppm has been reported for rats.

SKIN AND EYE: BGE causes mild eye and skin irritation. Repeated application of BGE to the skin of guinea pigs has caused sensitization. Mixture is expected to cause moderate eye and skin irritation.

OTHER: Signs of delerium and depression were noted following intragastric administration of BGE. In an unpublished report (cited by NIOSH), repeated inhalation of 75 ppm BGE (7 H/day; number of doses not given) produced slight testicular atrophy in 1 out of 10 rats. BGE was mutagenic in microbial systems and has influenced DNA repair in human lymphocytes.

Long-term overexposure to lead can cause anemia, neurological and gastrointestinal problems, kidney disease and reproductive effects. Lead can adversely affect the male and female reproductive system as well as the developing fetus.

12. ECOLOGICAL INFORMATION

Does not contain Class I or II ozone depleting substances. Specific ecotoxicity values were unavailable. Toxic effects are expected to resemble those seen in humans and test animals.

13. DISPOSAL CONSIDERATIONS

Completely mix resin components then cure before disposal. Recycle, reclaim and dispose of in accordance with applicable state, local and federal regulations.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME:	Not applicable
HAZARD CLASS:	Not applicable
IDENTIFICATION NUMBER:	Not applicable
SHIPPING LABEL:	Not Applicable
PACKING GROUP:	Not Applicable

15. REGULATORY INFORMATION

WHMIS CLASSIFICATION: D2A, D2B

SARA TITLE III – SECTION 313 SUPPLIER NOTIFICATION: This product contains the following ingredients subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372:

CHEMICAL:	CAS Number:	% Weight
Yellow Pigment	Proprietary*	< 0.3

* The SARA 313 category code for lead compounds is N420.

CALIFORNIA PROPOSITION 65: This product contains ingredients known to the State of California to cause cancer, birth defects and other reproductive harm.

16. OTHER INFORMATION	
KEY:	
ACGIH:	American Conference of Governmental Industrial Hygienists
CAS:	Chemical Abstracts Service
DOT:	Department of Transportation
IARC:	International Agency for Research on Cancer
MSHA:	Mine Safety and Health Administration
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible Exposure Limit
SARA:	Superfund Amendment and Reauthorization Act
TDG:	Transportation of Dangerous Goods
TLV:	Threshold Limit Value
WHMIS:	Workplace Hazardous Materials Information System

DISCLAIMER

The information in this MATERIAL SAFETY DATA SHEET should be provided to all who will use, handle, store, transport, or otherwise be exposed to this material. This information has been prepared for the guidance of plant engineering, operations and management, and for persons working with or handling this material. Cooper Industries/Cooper Power Systems believes this information to be reliable and up-top-date as of the date of publication, but makes no warranty that it is.