

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: KEY #630 NOVOLAC CONDUCTIVE EPOXY PART A
PRODUCT CODE: KR-630-000

HMIS CODES: H F R P
1 1 0 B

SECTION 1: MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: KEY RESIN COMPANY
ADDRESS: 4050 Clough Woods Drive
Batavia, OH 45103
EMERGENCY NUMBER: 1-800-424-9300 **DATE PRINTED:** 11/12/08
INFORMATION NUMBER: 1-513-943-4225 **PREPARER:** R. CAIN

SECTION 2: HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH		CARCINOGEN
			TLV	WT %	
Bisphenol F Epoxy Resin	28064-14-4	NE	NE	40-60	NO
Epoxy Phenol Novolac Resin	28064-14-4	NE	NE	20-40	NO
Benzyl Alcohol	100-51-6	NE	NE	1-10	NO
Talc	14807-96-6	2 mg/m ³	2 mg/m ³	1-10	NO
Mica	12001-26-2	NE	3 mg/m ³	1-25	NO
Depending on color, one or more of the following may be present:					
Titanium Dioxide	13463-67-7		10 mg/m ³	1-5	NO
Black Iron Oxide	1317-61-9	10 ppm	10 mg/m ³	<1	NO
Red Iron Oxide	1332-37-2	10 ppm	10 mg/m ³	1-5	NO
Yellow Iron Oxide	51274-00-1	10 ppm	5 mg/m ³	<1	NO
Chromium Oxide	1308-38-9	.5 mg/m ³	.5 mg/m ³	<1	

The exposure limits shown above for pigments are for dust exposure. They are not known to be hazardous after blended into a liquid. Wet sanding is suggested to eliminate airborne dust, if product is machined or ground. The only other exposure limits established for ingredients of this product apply to nuisance dusts from inert fillers. These fillers are blended into a liquid and pose no hazard as supplied.

Substances listed are present in concentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA hazards communication standard. Where proprietary ingredient is listed, the identity is available as provided in 29 CFR 1910.1200.

NE - Not Established

SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE	Not determined
VAPOR DENSITY	Not determined
VAPOR PRESSURE	1 mm Hg @ 200° F
VOC	0.00
SOLUBILITY IN WATER	NIL
APPEARANCE AND ODOR	Moderately viscous pigmented liquid with a mild odor
SPECIFIC GRAVITY (H2O=1)	1.51

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >200° F
METHOD USED: Closed Cup
FLAMMABLE LIMITS IN AIR BY VOLUME **LOWER:** Not determined
UPPER: Not determined
EXTINGUISHING MEDIA: Foam, dry chemical CO 2
OSHA FLAMMABILITY CLASSIFICATION: Combustible liquid, Class III B

SECTION 4: FIRE AND EXPLOSION HAZARD DATA (CON'T)

SPECIAL FIRE FIGHTING PROCEDURES: Decomposition and/or products of combustion may be toxic. Use self contained breathing equipment.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Decomposition and combustion products may be toxic.

SECTION 5: REACTIVITY DATA

STABILITY: Normally Stable

CONDITIONS TO AVOID: Elevated temperatures.

INCOMPATIBILITY (MATERIALS TO AVOID): Avoid contact with strong oxidizing agents, strong acids, strong bases. Mixing large quantities (1 gallon) with amines or epoxy hardeners can cause heat build-up and hazardous reaction.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon Monoxide, Carbon Dioxide, Phenolic Derivatives.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 6: HEALTH HAZARD DATA

HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

INHALATION: Exposure to vapors at elevated temperatures may cause irritation to respiratory tract and difficulty breathing.

EYE: May cause irritation to the eyes.

SKIN: A single exposure to the skin is unlikely to result in harm.

SKIN ABSORPTION: Repeated exposure to the skin can cause sensitization.

INGESTION: Oral toxicity is low. No hazards expected from normal industrial exposure.

HEALTH HAZARDS (ACUTE AND CHRONIC):

CARCINOGENICITY:

NTP CARCINOGEN: NO **IARC MONOGRAPHS:** NO **OSHA REGULATED:** NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Allergy, Eczema, or skin conditions.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush at once with potable water for at least 15 minutes.

SKIN: Wash with soap and warm water. Remove contaminated clothes. Wash before reuse. Destroy contaminated shoes.

INGESTION: Not likely to occur in normal handling. Give large quantities of water and get medical attention.

INHALATION: Remove to fresh air. Administer oxygen if breathing is difficult.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid contact. Soak up with clay or other absorbent material. Place in covered container for disposal.

WASTE DISPOSAL METHOD: Dispose in an approved incinerator or an approved landfill.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid contact.

OTHER PRECAUTIONS: Keep containers tightly closed when not in use. If mixture of A and B are allowed to remain in the mixing vessel past the pot life deadline, heat and a strong reaction will result. Grinding or other abrasive action to cured film may develop Micro crystalline Silica dust. Wear a dust mask during such operations.

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION: Avoid breathing vapor mist or spray.
VENTILATION: Use with good ventilation.
PROTECTIVE GLOVES: Wear impervious gloves.
EYE PROTECTION: Wear splash-proof chemical goggles.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Provide eye fountain and safety shower.
WORK/HYGIENIC PRACTICES: Practice good industrial hygiene. Wash with soap and water before eating, smoking, or using the restroom.

SECTION 9: REGULATORY INFORMATION

SARA TITLE III SECTION 313: Unless shown below, this product does not contain the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

CAS #	Chemical Name	Percent by Weight
1308-38-9	Chromium compound	<1%(not in all formulations)

PROP 65 (CARCINOGEN): Unless shown below, this product does not contain chemicals known to the state of California to cause cancer.

CAS #	Chemical Name	Percent by Weight
	None	

PROP 65 (TERATOGENIC): Unless shown below, this product does not contain chemicals known to the state of California to cause birth defects or other reproductive harm.

CAS #	Chemical Name	Percent by Weight
	None	

PROP 65 (CARCINOGENIC & TERATOGENIC): Unless shown below, this product does not contain chemicals known to the state of California to cause cancer or birth defects or other reproductive harm.

CAS #	Chemical Name	Percent by Weight
	None	

HAZARDOUS WASTE INFORMATION: Unless shown below, this product is not a hazardous waste according to definitions found in CFR-40.

STATE OF MICHIGAN CRITICAL MATERIALS: Unless shown below, this product does not contain ingredients appearing on the State of Michigan Critical Materials List.

CAS #	Chemical Name	Percent by Weight
	None	

D.O.T. PROPER SHIPPING NAME: Synthetic Resin Liquid
PROPER SHIPPING NAME: Synthetic Resin Liquid
HAZARD CLASS: non-hazardous
UN/NA ID NUMBER:

SECTION 10: DISCLAIMER

Data and recommendations presented herein are based upon our and other researchers and are believed to be accurate. The products discussed are distributed without warranty (expressed or implied) and the customer shall make his own determination of suitability for his particular purpose.

SECTION 6: HEALTH HAZARD DATA

HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

INHALATION: Vapors can cause severe irritation of respiratory tract.

SKIN: Corrosive - Can cause burns to skin.

EYE: Vapors - Can cause irritation and burns to eyes.

INGESTION: Can cause severe damage to mouth and throat.

HEALTH HAZARDS (ACUTE AND CHRONIC):

CARCINOGENICITY:

NTP CARCINOGEN: NO **IARC MONOGRAPHS:** NO **OSHA REGULATED:** NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Skin contact may aggravate existing dermatitis (skin condition). Over exposure to vapor or mist may aggravate existing respiratory conditions such as asthma, bronchitis, or fibrotic respiratory disease.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush immediately for 15 minutes with large amounts of potable water. DO NOT attempt to neutralize with chemical agents. Get immediate medical attention.

SKIN: Flush immediately for 15 minutes with potable water. DO NOT attempt to neutralize with chemical agents. Remove contaminated clothing. Launder before reuse. Discard contaminated shoes. Get medical attention if swelling and/or irritation occurs.

INGESTION: Give water to dilute stomach contents. DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

INHALATION: Remove to fresh air. Get medical attention if effects persist.

OTHER INSTRUCTIONS: Swallowing this corrosive material may result in severe ulceration, inflammation, and possible perforation of the upper alimentary tract, with hemorrhage and fluid loss. Aspiration of this product during induced emesis can result in severe lung injury. If evacuation of stomach is necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation. Contact a Poison Control Center for additional treatment information.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid contact. Allow only personnel wearing goggles, neoprene or rubber gloves and protective clothing to clean up spill. In confined areas a full face respirator is recommended. Absorb spill with clay, diatomaceous earth or other absorbent material. Place in disposal containers.

WASTE DISPOSAL METHOD: Dispose of in approved incinerator or an approved landfill.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid contact. Keep containers tightly closed when not in use. Do not remove labels from empty containers. If mixtures of Part B and Part A are allowed to remain in the mixing container past the pot life deadline, heat and a strong reaction will result.

OTHER PRECAUTIONS: none

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION: If vapor or mist is generated and the occupational exposure limit is exceeded, use appropriate NIOSH/MSHA

approved self contained breathing equipment or a full face respirator.

SECTION 8: CONTROL MEASURES (CON'T)

VENTILATION: Mechanical ventilation required if TLV is expected to be exceeded in confined areas.

PROTECTIVE GLOVES: Neoprene or natural rubber gloves

EYE PROTECTION: Chemical goggles

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Body covering clothes

WORK/HYGIENIC PRACTICES: Practice good industrial hygiene. Wash with soap and water before eating, smoking, or using the restroom.

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	None	

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	None	

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CAS #	Chemical Name	Percent by Weight
	None	

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CAS #	Chemical Name	Percent by Weight
	None	

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CAS #	Chemical Name	Percent by Weight
	None	

D. O. T. PROPER SHIPPING NAME: Caustic Alkali Liquid, N.O.S. (Modified Cycloaliphatic Amines); 8; UN1719; PG II

PROPER SHIPPING NAME: Caustic Alkali Liquid, N.O.S. (Modified Cycloaliphatic Amines)

HAZARD CLASS: Class 8, Corrosive

UN/NA ID NUMBER: UN 1719

PACKING GROUP: II

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