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Effective Date: 6/27/08

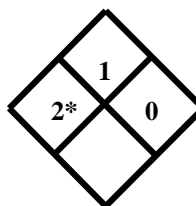
Material Safety Data Sheet

MSDS No: 6045

1. PRODUCT IDENTIFICATION

Trade Name: RenCast 3209-1

Chemical Family: Epoxy



NFPA RATING

Health:	3*
Flammability:	1
Reactivity:	0
Personal Protection:	

HMIS RATING

Synonyms:
RP 3209-1 Resin

Intended Use or Product Type:

Casting resin

2. COMPOSITION / INFORMATION ON INGREDIENTS

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				MFR.	CARCINOGEN STATUS		
			ACGIH		OSHA			IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	1317-61-9 Concentration	Iron Oxide 60.00 - 90.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	1317-65-3 Common Name: Concentration	Limestone Calcium carbonate 1.00 - 5.00 % by wt	10 mg/m3	NE	5 mg/m3	NE	NE	NR	NR	NR
*	14808-60-7 Common Name: Concentration	Quartz (SiO2) Crystalline silica 1.00 - 5.00 % by wt	0.05 mg/m3	NE	0.1 mg/m3	NE	NE	Yes	Yes	NR
*	2425-79-8 Common Name: Concentration	Oxirane, 2,2'-[1,4- Butanediylbis(Oxymethylene)]bis- Butanediol diglycidyl ether 1.00 - 5.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	25068-38-6 Common Name: Concentration	Phenol, 4,4'-(1- methylethylidene)bis-, polymer with (chloromethyl)oxirane Bisphenol A diglycidyl ether polymer 10.00 - 30.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	3101-60-8	Oxirane, [[4-(1,1- dimethylethyl)phenoxy]methyl]-	NE	NE	NE	NE	NE	NR	NR	NR

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	Common Name: Concentration	Butylphenyl glycidyl ether 1.00 - 5.00 % by wt								
*	84-74-2 Common Name: Concentration	1,2-Benzenedicarboxylic acid, dibutyl ester Dibutyl phthalate 1.00 - 5.00 % by wt	5 mg/m3	NE	5 mg/m3	NE	NE	NR	NR	NR

NE = Not Established NR = Not Reviewed * = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Causes severe skin irritation. Causes eye irritation. May cause skin burns and allergic skin reaction.

Primary Route(s) of Entry: Dermal; heated product may produce inhalable vapors.

Chronic: This product contains Crystalline silica. Repeated inhalation of respirable free Crystalline silica dust may cause delayed lung injury (silicosis) and cancer.

Prolonged or repeated exposure can cause liver and kidney damage, central nervous system effects and blood abnormalities. Repeated overexposure may cause delayed and serious injury. May cause birth defects and reproductive disorders. Substance can cause allergic reaction.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes. Seek immediate medical attention.

Inhalation: Remove to fresh air. Seek immediate medical attention.

Eyes: Immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention.

Overexposure Effects: Causes severe skin irritation. Causes eye irritation. May cause skin burns and allergic skin reaction.

Medical Conditions Aggravated by Exposure: Skin and eye conditions.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

5. FIRE FIGHTING MEASURES

Flash Point: 315°F (157 °C)
Flash Point Method Used: PMCC
Flammable Limits in Air (Lower - % by volume): Not established
Flammable Limits in Air (Upper - % by volume): Not established

Fire Fighting Extinguishing Media: Carbon dioxide, dry chemical, foam, water.

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Fire Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Decomposition and combustion products may be toxic.

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Remove spillage by absorbing in absorbent material.

7. HANDLING AND STORAGE

Signal Word: Danger!

Precautions: Causes severe skin irritation and may cause skin burns. Can cause eye irritation and allergic skin reaction. Do not get on skin or on clothing. Avoid contact with eyes. Wash thoroughly after handling. Notice! Contains crystalline silica. Breathing dust may cause cancer and delayed lung injury.

Other Handling Information: Crystalline silica may be generated when machining cured products. Overexposure may create possible cancer and silicosis hazard.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Wear impermeable gloves.

Respiratory Protection: Use NIOSH approved organic vapor cartridge respirator when vapor/mist exposure is likely.

Eye Protection: Wear splash-proof chemical goggles.

Engineering Controls: General mechanical and local exhaust in accordance with ACGIH recommendations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Black
Odor:	Mild
Physical State:	Filled Liquid
Solubility in Water:	Insoluble
Vapor Pressure:	0.2 mm Hg at 20°C (68 °F)
Specific Gravity:	2.5 - 2.6 (water = 1)
Boiling Point:	Not Determined
Evaporation Rate:	Not Determined
Vapor Density:	Not Determined
pH:	Not Determined
Coefficient of water/oil:	Not Evaluated

Percent Volatile: Negligible.

10. STABILITY AND REACTIVITY

Conditions to Avoid: Excessive heat for prolonged periods of time.

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Stability: Stable.**Incompatibility:** Strong oxidizers, acids and bases.**Hazardous Decomposition Products:** Combustion may form toxic materials, such as carbon dioxide, carbon monoxide.**Hazardous Polymerization:** Will not occur.

11. TOXICOLOGICAL INFORMATION

Sensitization: Possible in susceptible individuals.**Carcinogenicity:** This product contains crystalline silica. Repeated inhalation of respirable free crystalline silica dust may cause delayed lung injury (silicosis) and cancer.**Skin Irritation:** Irritant.**Eye Irritation:** Irritant.**Additional Information:** This product contains dibutyl phthalate which may cause adverse reproductive effects in laboratory animals. The relevance to humans is not known.

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.

14. TRANSPORT INFORMATION

DOT: Non-Bulk**Proper Shipping Name:** Not Regulated**IATA: Non-Bulk****Proper Shipping Name:** Not Regulated**IMDG: Non-Bulk****Proper Shipping Name:** Not Regulated**TDG: Non-Bulk****Proper Shipping Name:** Not Regulated

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261).

SARA Title III: Section 304 - CERCLA: This product contains the following chemicals regulated under Section 304 (40 CFR 302) as hazardous substance(s) for emergency release notification ("CERCLA" List):

Chemical Name: 1,2-Benzenedicarboxylic acid, dibutyl ester

Common Name: Dibutyl phthalate

CAS Number: 84-74-2

Percent in Composition: 1 - 5 % by wt

Component RQ: 10

SARA Title III: Section 313 Toxic Chemical List (TCL): This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: 1,2-Benzenedicarboxylic acid, dibutyl ester

Common Name: Dibutyl phthalate

Percent in Composition: 1 - 5 % by wt

Comment:

TSCA Section 8(b) - Inventory Status: All chemical components of this product are in compliance with TSCA inventory requirements.

TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

International Regulations:

Australian Inventory Status: This product contains only chemicals which are currently listed on the Australian Inventory of Chemical Substances.

Canadian Inventory Status: This product contains components which are included on the Domestic Substances List (DSL) and the Non-Domestic Substances List (NDSL).

Canadian WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. D2A, D2B

European Inventory Status (EINECS): This product contains only chemicals that are currently listed on the European Inventory of Existing Commercial Chemical Substances (EINECS).

Japanese Inventory Status: This product contains only chemicals currently listed on the Japanese Ministry of International Trade and Industry List of Existing and New Chemical Substances.

State Regulations:

California Proposition 65: The following is required composition information. This product contains the following chemical(s) which are currently listed on the California list of Known Carcinogens and Reproductive Toxins:

Chemical Name: 1,2-Benzenedicarboxylic acid, dibutyl ester

Common Name: Dibutyl phthalate

CAS Number: 84-74-2

Percent in Composition: 1 - 5 % by wt

Comment: Warning! This chemical is known to the State of California to cause birth defects or other reproductive harm.

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Chemical Name: Quartz (SiO₂)
Common Name: Crystalline silica
CAS Number: 14808-60-7
Percent in Composition: 1 - 5 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer.

Pennsylvania Right-to-Know: The following is required composition information:

Chemical Name: Iron Oxide
CAS Number: 1317-61-9
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane
Common Name: Bisphenol A diglycidyl ether polymer
CAS Number: 25068-38-6
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Limestone
Common Name: Calcium carbonate
CAS Number: 1317-65-3
Comment: Hazardous Substance

Chemical Name: Oxirane, 2,2'-[1,4-Butanediylbis(Oxymethylene)]bis-
Common Name: Butanediol diglycidyl ether
CAS Number: 2425-79-8
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: 1,2-Benzenedicarboxylic acid, dibutyl ester
Common Name: Dibutyl phthalate
CAS Number: 84-74-2
Comment: Environmental Hazardous Substance

Chemical Name: Quartz (SiO₂)
Common Name: Crystalline silica
CAS Number: 14808-60-7
Comment: Hazardous Substance

16. OTHER INFORMATION

MSDS No: 6045
Reason Issued: 6/08 add WHMIS

Other Information: D12121233 (d/si/klebt/ca3) [DD9]

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