

MATERIAL SAFETY DATA SHEET

Trade Name: **Raven 470 - Part A**

SECTION I: COMPANY IDENTIFICATION

Company: RLS
13105 East 61st Street South, Suite A
Broken Arrow, OK 74012

Emergency Telephone #: 800-424-9300
Chemtec

Revision Date: 10/10/07

Information Telephone #: 918-615-0020
800-324-2810

SECTION II: INGREDIENT INFORMATION

<u>INGREDIENT</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>	<u>PEL</u>	<u>TLV</u>
Epoxy Resin	28064-14-4	20 - 40%	N/E	N/E
Resorcinol Diglycidyl Ether	101-90-6	20 - 30%	N/E	N/E
Crystalline Silica, Quartz	14808-60-7	20 - 30%	*0.1 mg/m ³	*0.025 mg/m ³
Alkyl Polyglycidyl Ether Epoxy Resin	30499-70-8	5 - 10%	N/E	N/E
Silica, Amorphous, Fumed, Crystalline-free	67762-90-7	1 - 5%	*6 mg/m ³	*3 mg/m ³

N/E indicates "not established"

SARA Title III, Section 313 ingredients: Resorcinol Diglycidyl Ether All ingredients are TSCA inventory listed.

*Note: The PEL and TLV for this ingredient are the TWA for respirable dust levels only. In this product, it is pre-dispersed and not available as a dust. Therefore, under normal use conditions it is not considered a hazard.

SECTION III: PHYSICAL DATA

Boiling Point: > 200 deg F

Vapor Pressure: Not determined

Vapor Density: Not determined

Solubility in Water: Negligible

Appearance and Odor: Heavy paint consistency - mild epoxy odor

Specific Gravity: 1.5

Melting Point: Not determined

Evaporation Rate: Not determined

% Volatile by Volume: <1%

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point: >200 deg F, TCC Method

Extinguishing Media: Foam, CO₂, Dry Chemical

Special Fire Fighting Procedures: The use of self-contained breathing apparatus is recommended for firefighters. Water may be helpful in keeping adjacent containers cool. Avoid spreading burning liquid with water used for cooling purposes.

Unusual Fire and Explosion Hazards: Keep work areas free of hot metal surfaces and other sources of ignition.

NFPA classification: Health: 3 Flammability: 1 Reactivity: 0

OSHA/NFPA Fire Hazard Classification: Class III B

LFL: Not determined **UFL:** Not determined

SECTION V: REACTIVITY DATA

Stability: Stable, will react with amines.

Incompatibility: Strong acids and bases, selected amines, oxidizing agents.

Hazardous Decomposition or Byproducts: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, phenolics, acids, aldehydes, ketones and other unidentified toxic and/or irritating compounds.

Hazardous Polymerization: Will not occur.

SECTION VI: HEALTH HAZARD DATA

Primary Routes of Entry:

EYES: This product will cause eye irritation.

SKIN: This material is a skin irritant and can be an allergic sensitizer. Do not allow skin contact.

INHALATION: Inhalation can cause a severe allergic reaction.

INGESTION: Swallowing is a health hazard.

Carcinogenicity: The International Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz from occupational sources is carcinogenic to humans (Group 1 – carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibrils (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as “known to be a human carcinogen”. Refer to the Eleventh Report on Carcinogens (2005). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Emergency and First Aid Procedures:

EYES: Flush with large quantities of water for at least 30 minutes. Get immediate medical attention.

SKIN: Wash contacted areas thoroughly with soap and flowing water for 10 minutes. Do not remove from the skin with solvent, as solvent only increases contact. Remove and discard contaminated clothing.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

INGESTION: Induce vomiting only if person is conscious. Obtain emergency medical attention.

SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled: Keep sources of ignition and hot metal surfaces isolated from the spill. Material may flow slowly. Scrape into containers for disposal.

Waste Disposal Methods: Dispose of according to all local, state and federal regulations.

Precautions to Be Taken in Handling and Storing: Keep containers closed when not in use. Avoid prolonged or repeated contact with skin. Do not handle or store near flame, heat or strong oxidants. Do not store in direct sunlight. Avoid prolonged storage above 38 deg C (100 deg F).

SECTION VIII: CONTROL MEASURES

RESPIRATORY: If exposure may or does exceed occupational exposure limits, respiratory irritation is experienced, or during spray application, use a properly fitted MSHA/NIOSH approved respirator fitted with organic vapor cartridges. In addition, spray application may require the use of paint pre-filters. If sanding or grinding on cured material, use above respirator fitted with HEPA filters.

VENTILATION: General mechanical ventilation is sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

EYES: Use safety glasses, splash-proof eye goggles or goggles with full faceshield.

CLOTHING/GLOVES: Do Not Allow Skin Contact. Use impermeable gloves to prevent skin irritation. If potential for skin contact is present, impervious protective clothing should be worn.

OTHER PROTECTIVE EQUIPMENT: The availability of eye washes and safety showers in work areas is recommended.

SECTION IX: TRANSPORT DATA

Proper Shipping Name: Not regulated

Hazard Class: Not regulated by D.O.T. regulations

Identification Number: None

Packing Group: None

SECTION X: DISCLAIMER

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MATERIAL SAFETY DATA SHEET

Trade Name: **Raven 470 - Part B**

SECTION I: COMPANY INFORMATION

Company: RLS
13105 East 61st Street South, Suite A
Broken Arrow, OK 74012

Emergency Telephone #: 800-424-9300
Chemtrek

Revision Date: 10/10/07

Information Telephone #: 918-615-0020
800-324-2810

SECTION II: INGREDIENT INFORMATION

<u>INGREDIENT</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>	<u>PEL</u>	<u>TLV</u>
Modified Alkyl Amine	trade secret	40 - 50%	N/E	N/E
Crystalline Silica, Quartz	14808-60-7	20 - 25%	*0.1 mg/m ³	*0.025 mg/m ³
2,4,6-tris(Dimethylaminomethyl) Phenol	90-72-2	10 - 15%	N/E	N/E
4,4'-Methylenebiscyclohexanamine	1761-71-3	5 - 10%	N/E	N/E
Silica, Amorphous, Fumed, Crystalline-free	67762-90-7	1 - 5%	*6 mg/m ³	*3 mg/m ³

N/E indicates "not established"

SARA Title III, Section 313 ingredients: None

All ingredients are TSCA inventory listed.

*Note: The PEL and TLV for this ingredient are the TWA for respirable dust levels only. In this product, it is pre-dispersed and not available as a dust. Therefore, under normal use conditions it is not considered a hazard.

SECTION III: PHYSICAL DATA

Boiling Point: > 200 deg F

Vapor Pressure: Not determined

Vapor Density: Not determined

Solubility in Water: Negligible

Appearance and Odor: Heavy paint consistency with characteristic ammonia odor

Specific Gravity: 1.3

Melting Point: Not determined

Evaporation Rate: Not determined

% Volatile by Volume: <1%

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point: >200 deg F, TCC Method

Extinguishing Media: Foam, CO₂, Dry Chemical, Water Spray

Special Fire Fighting Procedures: The use of self-contained breathing apparatus is recommended for firefighters. Water may be helpful in keeping adjacent containers cool.

Unusual Fire and Explosion Hazards: Keep work areas free of hot metal surfaces and other source of ignition. Sudden reaction and fire may result if product is mixed with an oxidizing agent.

NFPA classification: Health: 3 Flammability: 1 Reactivity: 0

OSHA/NFPA Fire Hazard Classification: Class III B

LFL: Not determined **UFL:** Not determined

SECTION V: REACTIVITY DATA

Stability: Stable

Incompatibility: Strong acids and bases, selected epoxy resins and strong oxidizing agents.

Hazardous Decomposition or Byproducts: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, ammonia, aldehydes, ketones, nitrogen oxides and other unidentified toxic and/or irritating compounds.

Hazardous Polymerization: Will not occur.

SECTION VI: HEALTH HAZARD DATA

Primary Routes of Entry:

EYES: Severe eye irritant. May cause burns. Vapors may be irritating.

SKIN: Severe skin irritant. May cause injury to skin following prolonged or repeated contact. Repeated exposure may cause sensitization of the individual.

INHALATION: Vapors/mists may be corrosive to the upper respiratory tract. Repeated or prolonged exposure can result in lung damage. May cause respiratory tract sensitization and/or irritation of mucous membranes.

INGESTION: Not expected to be a relevant route of exposure. However, the material is corrosive and may cause permanent damage to the mouth, throat and stomach.

SYSTEMIC and OTHER EFFECTS: Product can be alkaline, corrosive and irritating to skin, ears, eyes and mucous membranes. May cause injury upon prolonged contact and repeated contact.

Carcinogenicity: The International Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz from occupational sources is carcinogenic to humans (Group 1 – carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibrils (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as “known to be a human carcinogen”. Refer to the Eleventh Report on Carcinogens (2005). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Emergency and First Aid Procedures:

EYES: Flush with large quantities of water for at least 15 minutes. Seek immediate medical attention.

SKIN: Wash immediately with soap and water. If irritation or sensitization occurs, remove individual from further contact with material. Get medical attention. Remove and wash contaminated clothing before reuse.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

INGESTION: Do not induce vomiting. Administer one glass of water. Seek medical attention immediately.

SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled: Keep sources of ignition and hot metal surfaces isolated from the spill. Material may flow slowly. Scrape into containers for disposal.

Waste Disposal Methods: Dispose of according to all local, state and federal regulations.

Precautions to Be Taken in Handling and Storing: Keep containers closed when not in use. Avoid breathing vapors and prolonged or repeated contact with skin. Do not handle or store near flame, heat or strong oxidants. Do not store in direct sunlight. Avoid prolonged storage above 38 deg C (100 deg F).

SECTION VIII: CONTROL MEASURES

RESPIRATORY: Respiratory protection should not be needed. If exposure may or does exceed occupational exposure limits, respiratory irritation is experienced, or during spray application, use a properly fitted MSHA/NIOSH approved respirator fitted with ammonia & methylamine cartridges. In addition, spray application may require the use of paint pre-filters. If sanding or grinding on cured material, use above respirator fitted with HEPA filters or a dust mask.

VENTILATION: General mechanical ventilation is sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

EYES: Use chemical safety glasses, splash-proof eye goggles or goggles with full faceshield.

CLOTHING/GLOVES: Use nitrile or other chemical resistant gloves. Wear clean, long-sleeved, body covering clothing and rubber boots.

OTHER PROTECTIVE EQUIPMENT: The availability of eye washes and safety showers in work areas is recommended.

SECTION IX: TRANSPORT DATA

Proper Shipping Name: Amines, liquid, corrosive, N.O.S. (alkyl amines)

Hazard Class: Corrosive Material - 8

Identification Number: UN 2735

Packing Group: III

SECTION X: DISCLAIMER

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