

MATERIAL SAFETY DATA SHEET

RP-34C Adhesive Hardener

I. PRODUCT AND COMPANY IDENTIFICATION

Chemical NamePolyamine
Product UseHardener for Adhesive Kit

Chemtel 24 hr Emergency Numbers:

Domestic 800-255-3924
International +01-813-248-0585

II. HAZARDS IDENTIFICATION

Emergency Overview Product is a black, adhesive hardener compound. Toxic fumes and gases may be released during combustion. Contact may cause irritation or burns to eyes and skin.
Hazard Statements Warning! May cause allergic skin and respiratory sensitization reactions with prolonged or repeated contact. May cause burns to the eyes and skin. May be irritating to eyes, skin and respiratory system. When adhesive resin is combined with adhesive hardener, vapors and a moderate amount of heat may be released.

Potential Health Effects:

Eyes: This product may cause irritation to the eyes, including redness, swelling, pain, tearing, and chemical burns. May cause permanent loss of vision.
Skin: This product may cause skin irritation, including redness, inflammation, and chemical burns. Prolonged, repeated skin contact may cause allergic skin sensitization reactions, resulting in a rash, swelling, itching, and possibly blistering of skin.
Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Ingestion of large amounts may produce more serious toxicities.
Inhalation: Inhalation of vapors may cause severe irritation to the respiratory system. Heating this product will release vapors, which are irritating to the respiratory system. Prolonged or repeated inhalation may cause allergic sensitization reactions, resulting in asthma-like symptoms.

HMIS Ratings: Health (3) – Flammability (1) – Reactivity (0) – Pers. Prot. (impervious gloves, chemical goggles)

III. COMPOSITION/INFORMATION ON INGREDIENTS

Component Identification	CASRN	% (by weight)
Methylenebis(cyclohexyl)amine, 4,4'-	1761-71-3	>20
Triethylenetetramine	112-24-3	<20
Polyethylene	9002-88-4	50-60
Ferric Oxide Black	1317-61-9	1-5
Phenol	108-95-2	1-5

*Component Information/Information on Non-Hazardous Components
This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).*

IV. FIRST-AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.
Skin Contact: For skin contact, wash immediately with soap and water. Get medical attention if irritation persists or develops.
Ingestion: If the material is swallowed, get immediate medical attention or advice-- Do not induce vomiting unless instructed to do so by medical personnel.
Inhalation: If inhaled, immediately remove to fresh air. Provide artificial respiration if necessary. If symptoms develop or persist, get immediate medical attention.
Notes to Physician: Provide general supportive measures and treat symptomatically. Product may aggravate pre-existing skin and respiratory system disorders.

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V. FIRE-FIGHTING MEASURES

Flash Point..... >148°C
 Autoignition Temperature Not Applicable
 LEL / UEL Not Applicable
 Flammability Classification: Non-Flammable
 Extinguishing Media Foam, Carbon Dioxide, or Dry Chemical
 NFPA Ratings Health (3) – Flammability (1) – Reactivity (0)

Special Firefighting Procedures: Closed containers may explode when exposed to extreme heat and pressure buildup. Firemen should wear full protective equipment, self-contained breathing apparatus.

General Fire Hazards: Irritating and toxic gases or fumes may be released during a fire.

VI. ACCIDENTAL RELEASE MEASURES

Containment Procedures: Contain discharged material.
Clean-Up Procedures: Absorb spilled material with nonflammable inert absorbent. Shovel the material into waste container and seal. Do not allow the spilled product to enter public drainage system or open water courses. Wear appropriate protective equipment and clothing during clean-up. Ventilate the contaminated area. (Do not use sawdust)
Evacuation Procedures: Isolate area. Keep unnecessary personnel away.
Special Procedures: None.

VII. HANDLING AND STORAGE

Handling Procedures: Do not get this material in your eyes, on your skin, or on your clothing. Use this product with adequate ventilation. Avoid breathing fumes if this product is used at high temperatures. When adhesive resin is combined with adhesive hardener, vapors and a moderate amount of heat may be released. Avoid breathing these vapors. Keep this product from heat, sparks, or open flame. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.
Storage Procedures: Keep the container tightly closed and store in a cool, well-ventilated place. When stored below 38°C, product has a 30 month shelf life.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines: Methylenebis(cyclohexyl)amine, 4,4'- NE
 Phenol OSHA 5ppm ACGIH TLV 5ppm
Engineering Controls: Good general ventilation required. Use local exhaust if necessary.

Personal Protective Equipment:

Eyes/Face: Wear chemical goggles. If splashing is possible, wear a face shield.
Skin: Use impervious gloves. The use of neoprene gloves is recommended. Use of protective coveralls and long sleeves is recommended.
Respiratory: If ventilation is not sufficient to effectively remove vapors and fumes, appropriate NIOSH/MSHA respiratory protection must be provided.
General: Use good industrial hygiene practices in handling this material.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point..... >200°C
 Melting Point Not Applicable
 Vapor Pressure Not Applicable
 Vapor Density (Air = 1) Not Applicable
 Specific Gravity (Water = 1) 1.0-1.1
 Evaporation Rate (butyl acetate = 1) Not Applicable
 pH..... Not Applicable
 Appearance and Odor Black Paste, Amine Odor
 Odor Threshold Not Applicable
 Viscosity..... Not Applicable
 Percent Volatile..... Not Applicable

X. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Keep container tightly closed. Keep away from incompatible materials and excessive heat.
Incompatibility: This product may react with oxidizing agents and strong acids.
Hazardous Decomposition: Carbon monoxide, ammonia, and hydrogen cyanide.
Hazardous Polymerization: When mixed with an epoxy resin, an irreversible, exothermic polymerization reaction occurs, liberating vapors and a moderate amount of heat.

XI. TOXICOLOGICAL INFORMATIONAcute Toxicity:

General Product Information: No information available for the product.
 Triethylenetetramine (TETA) is severely irritating to the eyes and skin, it is corrosive, and it is a skin and respiratory sensitizer. Allergic skin sensitization reactions may result in rash, swelling, itching, and possibly blistering of skin. Allergic respiratory sensitization reactions produce an asthma-like condition. Inhalation of TETA can produce respiratory tract irritation, itching of the face, redness, and swelling. Ingestion of TETA can cause burns of the mouth, esophagus, and gastrointestinal tract. Phenol is corrosive and burns any tissue on contact. It can cause severe damage and blindness from direct contact with the eye. When phenol contacts the skin, it causes a white burn, which is not initially painful, because the nerve endings are deadened. Later there can be intense pain and gangrene. Phenol is rapidly absorbed through the skin. Symptoms of acute phenol poisoning include headache, dizziness, weakness, dim vision, ringing in the ears, breathing difficulty, cyanosis, sudden collapse, loss of consciousness, delirium, coma, and death. CNS depression can develop rapidly after phenol ingestion. Phenol is a severe respiratory tract irritant and cause pulmonary edema.

Component LD50/LC50:

Polyethylene (9002-88-4)	Inhalation LC50 Mouse: 12 gm/m ³ /30M
Triethylenetetramine (112-24-3)	Oral LD 50 Rat: 2500 mg/kg Oral LD50 Mouse: 1600 mg/kg Dermal LD50 Rabbit: 805 mg/kg
Phenol (108-95-2)	Inhalation LC50 Rat: 316 mg/m ³ Oral LD50 Rat: 317 mg/kg Oral LD50 Mouse: 270 mg/kg Dermal LD50 Rabbit: 630 mg/kg
Methylenebisocohexanamine, 4,4'-	Acute Oral Toxicity LD50 (Rat) >625.0 mg/kg Acute Dermal Toxicity LD50 (Rabbit) >2110.0 mg/kg (no deaths) Inhalation Toxicity LC50 (Rat) >10.0 mg/L/ 1 hr (no deaths)

Carcinogenicity:

General Product Information: No data available for product.
 Phenol induced tumors on the skin of mice and promoted the carcinogenic effect of other substances.

Component Carcinogenicity:

Polyethylene (9002-88-4)	IARC: Monograph 19, Supplement 7; 1987 (Group 3 (not classifiable))
Phenol (108-95-2)	ACGIH: A4 - Not Classifiable as a human Carcinogen IARC: Monograph 47; 1989 (Group 3 [not classifiable])
Methylenebisocohexanamine, 4,4'-	Not classifiable as a carcinogenic substance.

Epidemiology:

No data available for product.

Neurotoxicity:

No data available for product.

Mutagenicity:

No data available for product.

Teratogenicity:

No data available for product.

Other Toxicological Information: No data available for product.

XII. ECOLOGICAL INFORMATIONEcotoxicity:

No data available for this product.

Environmental Fate:

No data is available concerning environmental fate, biodegradation, or bioconcentration for this product.

XIII. DISPOSAL CONSIDERATIONSUS EPA Waste Number & Description:

General Product Information: Wastes may be classified as D002 corrosive wastes. Wastes must be tested to determine applicable waste codes.

Component Waste Numbers: Phenol (108-95-2) RCRA: waste number U188

Disposal instructions: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

XIV. TRANSPORT INFORMATIONUS DOT Information:

Shipping Name: Amines, solid, corrosive, N.O.S. (Triethylenetetramine)
 Hazard Class: 8
 UN/NA Identification Number: 3259
 Packing Group: II
 Required Label(s): Corrosive
 Additional Info: None

International Transportation Regulations:IMO Shipping Data:

Shipping Name: Amines, solid, corrosive, N.O.S. (Triethylenetetramine)
 Hazard Class: 8
 UN/NA Identification Number: 3259
 Packing Group: II
 Placarded: Corrosive
 Additional Info: IMDG Page: 8109-2; HazMat STCC: 4935601; EmS No.: 8-05

Additional Info (Cont'd): MFAG No.: 320; Flash Point: 100°C

ICAO/IATA Shipping Data:

Shipping Name: Amines, solid, corrosive, N.O.S. (Triethylenetetramine)
 Hazard Class: 8
 UN/NA Identification Number: 3259
 Packing Group: II
 Required Label(s): Corrosive
 Additional Info: Flash Point: 100°C; Shipment per 49 CFR 171.11

XV. REGULATORY INFORMATION

US Federal Regulations:

General Product Information: No additional information.
Component Information: This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).
Phenol (CAS# 108-95-2) % by weight: 1-5%

State Regulations:

General Product Information: No additional information.
Component Information:

Component	CASRN	CA	FL	MA	MN	NJ	PA
Polyethylene	9002-88-4	N	N	N	N	N	N
Triethylenetetramine	112-24-3	N	Y	Y	N	Y	Y
Methylenebis(cyclohexyl)amine, 4,4'-	1761-71-3	N	N	N	N	N	N
Ferric Oxide Black	1317-61-9	N	N	N	N	N	N
Phenol	108-95-2	Y	Y	Y	Y	Y	Y

Other Regulations:

General Product Information: Components of this product have been checked against the non-confidential TSCA inventory by CAS registry number. Components not identified on this non-confidential inventory are exempt from listing (i.e. polymers) or are listed on the confidential inventory as declared by the supplier.

Comp. Information (Canada): The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CASRN	%	Minimum Concentration
Triethylenetetramine	112-24-3	1-10	0.1% Item 1629 (1669)
Phenol	108-95-2	0-5	1% Item 1261 (1374)

All identified ingredients are on the Canadian Domestic Substances List.

XVI. OTHER INFORMATION

Date of Issue: January 26, 2013
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 Contact Person: Douglas Boberg
 Contact Phone: +1-940-569-1471

Key/Legend:

NA = Not applicable; NE = Not established; EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health administration.

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