

Material Safety Data Sheet

Date Issued: 02.24.03
Revised Date: 02.25.10

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Supercedes: 05.01.08

Res-Tek Inc.
110 Riverside Drive
Cartersville, Georgia 30152
Non-Emergency Product Information: 1-888 / 737.8351
Emergency Only (Chemtrec): 1-800 / 424-9300

1. PRODUCT INFORMATION

Trade Names / Synonyms: **Res-Tek[®] “R-Component”** (UN 1993)
Chemical Name: Blend of methyl methacrylate and polyisocyanate prepolymer
Chemical Family: Methyl methacrylate / aromatic isocyanate
Chemical formula: Mixture **Product Use:** Additive for Industrial Flooring Resin

2. COMPOSITION, INFORMATION ON INGREDIENTS

Substance Description	Weight Percent	CAS#	Exposure Guidelines	
			OSHA (PEL)	ACGIH
Methyl methacrylate	30.0-50.0	80-62-6	100 ppm TWA	50 ppm TWA; 100 ppm STEL(15 min.)
Polyisocyanate	50.0-70.0	proprietary	Not established	Not established
Diphenylmethane diisocyanate	0.1-2.0	26447-40-5	Not established	Not established
4,4-Diphenylmethane diisocyanate	10.0-25.0	101-68-8	0.020 ppm	0.005 ppm
Oxygenation inhibitor	0.1-4.0	proprietary	10 mg./m ³	10 mg/m ³

3. HAZARDS IDENTIFICATION

Low viscosity, brown liquid with a sweet ester odor.
Flammable liquid and vapor. May be ignited by heat, sparks or flame.
Inhalation of high concentrations of vapor may cause headache, nausea, drowsiness and unconsciousness.
Vapors may travel to source of ignition and flash back.
May cause irritation to the eyes, skin and respiratory tract.
When heated, formation of explosive vapor/air mixtures.
Danger of bursting of closed system due to vigorous exothermic polymerization. Avoid uncontrolled polymerization.
Container may explode if heated.

4. FIRST AID PROCEDURES

EYE CONTACT: Direct contact can cause severe eye irritation. In case of contact, flush eyes with running water for at least 20 minutes. Hold eyelids apart during flushing to ensure rinsing of the entire surface of the eye with water. Call a physician for immediate follow-up. **Do not wear contact lenses when using this product.**

SKIN CONTACT: Expected to cause skin irritation. In case of contact, wash skin with soap and water. Remove contaminated clothing. If irritation persists, see a physician.

SKIN ABSORPTION: Not expected to be absorbed through the skin in toxic amounts. In case of contact, flush skin with soap and water.

INHALATION: Expected to be irritating to the respiratory tract. If inhaled and irritation occurs, move victim to fresh air. If irritation persists, call a physician. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Inhalation can cause headache, drowsiness, dizziness and nausea.

INGESTION: Expected to be slightly toxic by ingestion. Symptoms may include sedation, loss of muscular coordination, stomach cramps and breathing difficulties. If swallowed, do not induce vomiting. Give 1 to 2 cups of milk or water to drink as directed by a physician. Never give anything by mouth to an unconscious person. If swallowed, call physician immediately.

CHRONIC EFFECTS OF OVEREXPOSURE:

Inhalation and skin contact can lead to an allergic respiratory sensitization.

OTHER

HEALTH EFFECTS:

Medical conditions which may be aggravated by exposure to this product include: Conjunctivitis of the eye, dermatitis of the skin, asthma and respiratory diseases.

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5. FIRE FIGHTING MEASURES AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD): 48 deg-F (9 deg-C) (Setaflash Closed Cup) (of MMA)

FLAMMABILITY LIMITS: Lower: 2.1% (21,000 ppm) Upper: 12.5% (125,000 ppm)
(Vol. & air, 1 bar, 68 deg-F)

EXTINGUISHING MEDIA: Small fires – Use water mist, carbon dioxide, alcohol resistant foam, dry chemical or cover with sand.
Large fires – Water spray, fog or alcohol resistant foams. **Do not use straight streams.** Move containers from fire area if it can be done without risk.

FIRE FIGHTING INSTRUCTIONS:

Evacuate enclosed and surrounding areas. If smoke and fumes cannot be avoided, use proximity suits and self-contained breathing apparatus. Use water spray to cool containers and disperse vapors. Keep spills away from sources of ignition.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Vapor is heavier than air and forms explosive mixture with air. Never use welding or cutting Torches on or near containers or drums (even when empty). Product residue or vapor in drums or container can ignite explosively. Cool warm or bulging containers to ambient temperature with water from a safe distance. Then wear eye and face protection and protective clothing While carefully opening bung to vent pressure.

HAZARDOUS

PRODUCTS/COMBUSTION: Thermal decomposition may yield water, carbon dioxide, carbon monoxide, or acrid fumes.

6. ACCIDENTAL RELEASE MEASURES

ACTIONS TO TAKE FOR SPILLS /LEAKS:

See Sections 4, 8 and 11 for hazards and exposure controls. Dike with sand or earth to contain spill. Wear personal protective equipment discussed in section 8. Eliminate all ignition sources. All equipment used when handling the product must be grounded. Stop leak if you can do so without Risk. Prevent entry into waterways, sewers, basements, or confined areas. Absorb with sand or other non-flammable absorbent material and transfer to approved container (see Section 14) for disposal.

7. PRECAUTIONS FOR SAFE HANDLING AND STORAGE

STORAGE: Store only in original containers in a cool, dry, well-ventilated area away from sources of ignition. Limit storage of flammable liquids to approved areas equipped with overhead sprinklers. Do not Smoke in the vicinity of material. Keep storage containers from direct sunlight. Protect material from contamination (refer to Section 8 for incompatibilities). Keep containers tightly closed when not in use. **Maximum storage temperature is 95 deg-F (35 deg-C).**

HANDLING: product is supplied in a stabilized form. Stir well before decanting from drum. Open container Carefully as it may be pressurized. Use portable ventilation if necessary at job site. Ground containers when pouring or transferring and keep closed when not in use. Use explosion-proof equipment. Do not eat, drink, smoke, or chew tobacco around material.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EYE PROTECTION: Approved goggles are required. **Do not wear contact lenses when using this product.**

PROTECTIVE GLOVES: Wear chemical resistant gloves.

RESPIRATORY: Atmospheric levels should be maintained below the exposure limits listed in Section 11 by using engineering controls. If not feasible, use a MSHA/NIOSH approved organic vapor respirator. When using respirator cartridges or canisters, change often as recommended to assure breakthrough exposure does not occur. Eye wash facility and emergency shower should be readily accessible.

OTHER PROTECTION: If repeated or prolonged skin contact or contamination is likely, protective clothing should be worn.

VENTILATION: Provide general and/or local exhaust ventilation to maintain airborne levels below the exposure limits in Section 11. Refer to "Industrial Ventilation" by ACGIH for a manual of recommended practices.

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PERSONAL HYGIENE/

WORK PRACTICES: Establish good personal hygiene and work practices. Always wash hands and face before eating, drinking, or smoking

9. CHEMICAL AND PHYSICAL PROPERTIES

BOILING POINT: 212 deg-F(100 deg-C) at 14.5 psi (of MMA)
MELTING POINT: -54 deg-F (-48 deg-C) at 14.5 psi (of MMA)
SOL. IN WATER: Reacts slowly with water to liberate CO₂
VAPOR PRESSURE: 37.8 mm Hg at 68 deg-F (20 deg-C) (of MMA)
AUTO IGNITION TEMP: 806 deg-F (430 deg-C)
FLASH POINT; 48 deg-F (9 deg-C) Setaflash Closed Cup at 14.5 psi (of MMA)
APPEARANCE/ODOR: Low viscosity, brown liquid with a sweet ester odor
DENSITY 68 deg-F(20 deg-C): 7.86 lb./gal (0.94 g/cc)
VAPOR DENSITY: >1 (of MMA) {Air=1}
SPECIFIC GRAVITY: 0.94
EVAPORATION RATE: >1 (Butyl Acetate = 1)
VISCOSITY 68 deg-F (20 deg-C): 28-32 sec.; No. 4 Zahn Cup

10. STABILITY AND REACTIVITY

STABILITY: This product is stable.

INCOMPATIBILITY: Water, peroxides, amines, sulfur compounds, heavy metal ions and alkalis, reducing agents (e.g. rust) and oxidizing agents.

HAZARDOUS PRODUCTS OF DECOMPOSITION:

Thermal decomposition may yield water, oxides of carbon, and acid fumes.

HAZARDOUS POLYMERIZATION: May occur when exposed to excessive heat or contaminated with incompatible materials.

CONDITIONS TO AVOID: Heat and ignition sources, aging, contamination, oxygen free atmosphere.

11. TOXICOLOGICAL INFORMATION

CHEMICAL NAME	Toxicity Data			Exposure Limits	
	LD50-oral	LD50-dermal	LC50	PEL	TLV
Methyl methacrylate	7872 mg/kg, rat	>9400 mg/kg, rabbit	29.5 mg/l/4 hr ,rat	100ppm	100 ppm
Polyisocyanate	Not established	Not established	Not established	None	None
4,4-Diphenylmethane diisocyanate	31690 mg/kg, rat	Not established	178 mg/l/4 hr, rat	C-0.02ppm	0.005ppm
Diphenylmethane diisocyanate	Not established	Not established	Not established	None	None
Oxygenation inhibitor	650 mg/kg, mouse	890 mg/kg, rat	Not established	10 mg/m ³	10 mg/m ³
Carcinogenicity:					
IARC.....No	OSHANo				
NTPNo	ACGIH.....No				

12. ECOLOGICAL INFORMATION

GENERAL: ----CERCLA/SARA requires notification to the appropriate Federal, state, and local authorities of releases hazardous or extremely hazardous quantities equal to or greater than the Reportable Quantities (RQs) in 40 CFR 302.4 and 40 CFR 355.
----SARA Title 313 requires submissions of annual reports of releases of toxic chemicals that appear in 40 CFR 372. Components presents in this product at a level that could require reporting under statute are listed in Section 16.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Containers are still hazardous when empty. DO NOT CUT WITH TORCH! Product residue is flammable and hazardous. Do not reuse containers. Dispose of in accordance with all local, state and federal regulations. Contact Res-Tek Inc. at (888) 737-8351 for assistance with disposal requirements.

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14. TRANSPORT INFORMATION

PRIMARY HAZARD: Flammable Liquid **SECONDARY HAZARD:** None

DOT SHIPPING NAME: Flammable Liquid, N.O.S.

HAZARD CLASS: Flammable Liquid **UN#:** 1993 **UN CLASS:** 3.0 **PG#:** II

49 CFR REFERENCE: 173.202, 173.242 (HM-181)

LABEL(S): Flammable Liquid **PLACARD(S):** Flammable Liquid

IATA SHIPPING RESTRICTIONS: Passenger aircraft – 5 liters maximum per package.
Cargo only aircraft – 60 liters maximum per package.

AUTHORIZED CONTAINER TYPE(S): See 49 CFR section 173.202, 173.242 (HM-181)

15. REGULATORY INFORMATION

Substance Description	DSL	TSCA	MA	NJ-RTK	PA	FL	CA	MN	RI	SARA
Methyl methacrylate	L	L	L	sn 1277	L	L	L	L	L	L
Polyisocyanate	L	L	NL	TSRN	NL	NL	NL	NL	NL	NL
4,4-Diphenylmethane diisocyanate	L	L	L	L	L	L	NL	NL	L	L
Diphenylmethane diisocyanate	L	L	NL	L	NL	NL	NL	NL	NL	NL
Oxygenation inhibitor	L	L	L	NL	L	L	NL	NL	L	NL

DSL	Domestic Substances List – Canada	PA	Penn. Hazardous substance List	RI	Rhode Island Hazardous Substance List
TSCA	Toxic Substance control Act	FL	Florida Hazardous Substance List	SARA	SARA Title III, Section 313
MA	Massachusetts Substance List	CA	California-Directors List of Hazardous Sub.	L	Listed
NJ RTK	New Jersey Right to Know Hazard Sub.	MN	Minnesota Hazardous Substance List	NL	Not Listed

OTHER REGULATORY INFORMATION: WHMIS HAZARD CLASS: Class B, Div 2

NFPA HEALTH 3 NFPA REACTIVITY 2

NFPA FLAMMABILITY 3 NFPA OTHER 0

Hazard Index: 4-severe, 3-high, 2-moderate, 1-slight, 0-insignificant

16. ADDITIONAL INFORMATION

FOR INDUSTRIAL USE ONLY!
KEEP OUT OF REACH OF CHILDREN!
THRESHOLD ODOR LIMIT OF THIS PRODUCT IS LESS THAN 1 PPM.

CERCLA reporting: RQ = 1000# for Methyl methacrylate
SARA Title 313 Reporting: Methyl methacrylate
SARA Title 313 Reporting: 4,4-Diphenylmethane diisocyanate

THIS MATERIAL IS IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT AND DOMESTIC SUBSTANCE LIST - CANADA

1996 North American Emergency Response Guide Number 129P

For additional product safety or use information, contact Res-Tek Inc. at the address or phone number listed on page #1.

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