

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification	
Product name RS-88 ISO (Part B) Trade Name POLYURETHANE PREPOLYMER	<i>IN CASE OF EMERGENCY:</i> INFOTRAC: 1-800-535-5053 INFORMATION: 1-800-223-6680
Manufacturer Metzger McGuire Co. PO Box 2217 Concord, NH 03302	
Date of Preparation: 11/19/10	Replaces: 1/18/07
Preparers Name: Peter Spinney	

Section 2. Composition, Information on Ingredients			
<i>Component Information</i>		<i>Exposure Limits</i>	
<i>Chemical Name</i>	<i>CAS#</i>	<i>OSHA PEL, TWA</i>	<i>TLV (ppm) ACGIH</i>
4,4'-Diphenylmethane-Diisocyanate Modified MDI	101-68-8 Not Disclosed	0.20 mg/m ³ N/E	0.05 mg/m ³ N/E
Propylene Carbonate	108-32-7	N/E	N/E

TLV™-Threshold Limit Value exposure (8 hour, time weighted average unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. PEL - OSHA Permissible Exposure Limit. N/E indicates that no exposure limit has been established.

Section 3. Hazards Identification	
WARNING! This product contains isocyanates that readily react with body moisture causing eye and skin irritation. May cause allergic respiratory reaction. May cause skin sensitization and dermatitis. Avoid inhaling fumes.	
Potential Health Effects	Primary Routes of Exposure: <input checked="" type="checkbox"/> Skin contact <input checked="" type="checkbox"/> Skin Absorption <input checked="" type="checkbox"/> Eye Contact <input checked="" type="checkbox"/> Inhalation <input type="checkbox"/> Ingestion
Routes of Exposure	Symptoms
Inhalation	Inhalation of vapors can cause burning sensation in the respiratory tract with running nose, sore throat, coughing chest discomfort and reduced lung function.
Skin	Can cause skin irritation such as blistering, swelling, redness and rashes.
Eyes	Exposure to vapors and mist can cause irritation, pain, conjunctivitis and corneal edema.
Ingestion	Harmful if swallowed. Can cause abdominal pain, nausea, vomiting and diarrhea.
Chronic	Prolonged contact with skin can result in respiratory sensitization. Repeated inhalation exposure may cause lung damage and asthma.
Carcinogenicity	OSHA: Not Regulated NTP: Not Listed IARC: Not Listed

Section 4. First Aid Measures	
Eyes	Immediately wash the eyes with large amounts of tepid water for at least 15 minutes, occasionally lifting the lower and upper lids. Get medical attention immediately.
Skin	Immediately wash the contaminated skin with soap and water. If this chemical penetrates the clothing, immediately remove the clothing, wash the skin with soap and water, and get medical attention.
Inhalation	Immediately move the exposed person to fresh air. If breathing is difficult, properly trained personnel may administer oxygen. Get medical if symptoms persist.
Ingestion	If large quantities have been swallowed, DO NOT INDUCE VOMITING. If victim is conscious and alert, give 2 - 4 cups of lukewarm water. Get medical attention.

Section 5. Fire Fighting Measures	
Extinguishing Media: <input type="checkbox"/> Water <input checked="" type="checkbox"/> Carbon Dioxide <input checked="" type="checkbox"/> Dry Chemical <input checked="" type="checkbox"/> Foam <input type="checkbox"/> Alcohol Foam	
Flash Point	>200°F SETA Flash LEL: N/D UEL: N/D

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Flammability Classification OSHA/NFPA	Flash Pt. >230°F Class III B combustible Liquid
Extinguishing Media	Carbon dioxide, dry chemical, foam.
Unusual Fire and Explosions Hazards	Isolate fire area and deny unnecessary entry. Fire fighters should wear positive-pressure self-contained breathing apparatus (SCBA) and protective clothing. Cool closed containers with WATER SPRAY to avoid explosion. Heat from fire can generate vapor and decomposition products that may cause a health hazard.

Section 6. Accidental Release Measures	
ISOLATE AREA OF THE SPILL! Eliminate all ignition sources. Soak up small spills with inert solids such as vermiculite or other absorbent materials. Shovel into suitable disposal container. Persons not wearing protective equipment should be excluded from the area of spill until cleanup has been completed.	

Section 7. Handling & Storage	
Store material in a clean, cool, ventilated area away from all sources of ignition. Clean up spills at once. Keep container tightly closed when not in use. This product reacts readily with moisture generating heat and gas. Avoid mixing with water. Always wear protective equipment. Wash hands and other exposed areas thoroughly after handling. Provide appropriate ventilation/respiratory protection against nuisance dust during sanding/grinding of cured product.	

Section 8. Exposure Controls/Personal Exposure	
Eye Protection	Avoid splashing. Wear chemical-resistant safety goggles or face shield. Contact lenses must not be worn.
Skin Protection	Chemical resistant synthetic rubber (neoprene, nitrile) gloves and other protective clothing are recommended to prevent repeated or prolonged skin contact.
Respiratory Protection	If personal exposure cannot be controlled below applicable limits by area ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in section 2.
Ventilation	General area ventilation is acceptable if the exposure is maintained below applicable exposure limits. (See Section 2) Local exhaust is recommended for confined areas. See 29 CFR 1910.146
Other Precautions	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Section 9. Physical and Chemical Properties			
Percent Volatile Content by Volume (PBV) or Weight (PBW)	N/A	Specific Gravity (gm/cc)	1.14
VOC Content	N/A	Weight per Gallon	9.5 lbs
Boiling Point	>300°C	Evaporation Rate	N/A
Vapor Pressure (mm Hg)	0.000004 mm Hg	Solubility in Water	immiscible
Vapor Density (Air=1)	8.5	Appearance and Odor	Clear liquid, slight musty odor

Section 10. Stability and Reactivity	
Stability	Stable x Unstable
Conditions to Avoid	Protect from heat, sparks, flame and possible sources of ignition.
Incompatibility	Avoid contact with strong acids and bases
Hazardous Decomposition Products	Fumes produced when heated to decomposition may contain Carbon dioxide, carbon monoxide, aldehydes and other hazardous gases.
Hazardous Polymerization	Mixing large quantities of pre-polymer and polyol will generate significant heat. Uncontrolled cure conditions may char and decompose the resultant polymer

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	generating unidentified toxic fumes and vapors.
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Section 11. Toxicological Information Acute Toxicity (see Section 3. for Exposure Symptoms)

Chemical Identity	ORAL LD 50	DERMAL LD 50	Inhalation LC 50
	Rat >5000 mg/kg	Rabbit >5000 mg/kg	Rat 2240 mg/m ³ 1 hour

Section 12. Ecological Information

Polymeric MDI. LC50 (Zebra Fish) > 1000 mg/l. EC50 (Daphnia magna) (24 hour) 1000mg/l (E.Coli) >100 mg/l

Section 13 Disposal Considerations

RCRA: This product, if disposed as shipped, is not considered a hazardous waste as specified in 40 CFR 261. Dispose of in accordance with all applicable federal, state and local regulations. Chemicals, even small quantities should never be poured down drains, sewers or waterways. **Care must be taken to prevent environmental contamination from the use of this material.**

Section 14 Transportation Information

This product if offered for shipment is **not regulated** by USDOT 49 CFR Parts 171 - 180: Regulation of Hazardous Materials Transportation in Commerce.

Shipping Information	Liquid Plastic NOI
Classification	Not Regulated (Containers less than 5000 lbs.)
Identification	N/A
Packing Group	N/A
Label	N/A

Section 15. Regulatory Information

Regulations Governing Product:

Inventory Status: United States (TSCA) - All ingredients are on the inventory or exempt from listing.

SARA TITLE III

EPCRA 311/312 Tier II Chemical Inventory Reporting: Immediate (acute)

	Health	Flammability	Chemical Reactivity
HMIS Rating	2*	1	1

Regulations Governing Ingredients

Chemical Name	CAS #/ Category#	CERCLA RQ	EPCRA 313 RQ	EPCRA 302 RQ EHS

Section 16 Other Information

REFERENCES

CRC Press: Handbook of Chemical and Physical Constants by David R. Lide
 Merck & Company: The Merck Index
 Dictionary of Toxicology by Robert Lewis
 J.J. Keller & Associates: Chemical Ratings Guide HMIS III
 US Department of Transportation, Research and Special Programs Administration: Hazardous Materials Table

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