

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification	
Product name <i>SPAL-PRO RS 65 ISO</i> Trade Name <i>POLYURETHANE PREPOLYMER</i> Manufacturer Metzger McGuire Co. PO Box 2217 Concord, NH 03302	IN CASE OF EMERGENCY: INFOTRAC: 1-800-535-5053 INFORMATION: 1-800-669-5217
Date of Preparation: 9/17/2008	Replaces: -

Section 2. Composition, Information on Ingredients			
Component Information		Exposure Limits	
Chemical Name	CAS#	OSHA PEL, TWA	TLV (ppm) ACGIH
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
Flammability Classification OSHA/NFPA	Flash Pt. N/A Class Liquid
Extinguishing Media	Carbon dioxide, dry chemical, foam.

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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.
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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 mmHg	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 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.

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				
<i>Regulations Governing Product:</i>				
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	
<i>Regulations Governing Ingredients</i>				
Chemical Name	CAS #/ Category#	CERCLA RQ	EPCRA 313 RQ	EPCRA 302 RQ EHS

Section 16 Other Information
<u>REFERENCES</u>
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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MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification	
Product name/ SPAL-PRO RS 65 Part A Polyol Trade Name POLYOL AMINE MIXTURE	<i>IN CASE OF EMERGENCY:</i> INFOTRAC: 1-800-535-5053 INFORMATION: 1-800-669-5217
Manufacturer Metzger McGuire Co PO Box 2217 Concord, NH 03302	Replaces: -
Date of Preparation: 9/17/2008	

Section 2. Composition, Information on Ingredients			
<i>Component Information</i>		<i>Exposure Limits</i>	
<i>Chemical Name</i>	<i>CAS#</i>	<i>TLV(ppm)ACGIH</i>	<i>OSHA PEL, TWA</i>
Poly(oxyalkylene) Amine Mixture	N/A	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	
OSHA Hazard Classification: Non-Hazardous	
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 checked="" type="checkbox"/> Ingestion	
Routes of Exposure	Symptoms
Inhalation	May cause lung damage with high acute exposure. Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and upper respiratory tract.
Skin	Dermal exposure can cause severe irritation and/or burns characterized by redness, swelling, and scab formation. Prolonged skin exposure may cause permanent damage.
Eyes	Severe irritation and/or burns can occur following exposure. Direct contact may cause impairment of vision and corneal damage. Rinsing of the eye should take place immediately.
Ingestion	Irritation and/or burns can occur to the gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding, and/or tissue ulceration and perforation. Aspiration may lead to lung damage.
Chronic	Inhalation: Prolonged or repeated exposure will cause more severe irritation and possibly lung damage. Skin Contact: Prolonged or repeated exposure may cause extensive permanent skin damage. Effects secondary to tissue destruction may also occur upon prolonged or repeated exposure. Ingestion: There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure.
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 flush skin with plenty of water for 15 minutes. If clothing comes in contact with the product, the clothing should be removed immediately and should be laundered before re-use. Get medical attention immediately.
Inhalation	Remove individual to fresh air. Seek medical attention if breathing becomes difficult.
Ingestion	Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person.

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Section 5. Fire Fighting Measures	
Extinguishing Media: <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Carbon Dioxide <input checked="" type="checkbox"/> Dry Chemical <input type="checkbox"/> Foam <input checked="" type="checkbox"/> Alcohol Foam	
Flash Point	>200°F SETA Flash LEL: N/D UEL: N/D
Flammability Classification OSHA/NFPA	Flash Pt. N/A Class Liquid
Extinguishing Media	Water, Carbon dioxide, dry chemical, alcohol 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 rupture. Heat from fire can generate vapor and decomposition products that may cause a health hazard.

Section 6. Accidental Release Measures	
Personal Protection for Emergency Situations: Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to boots, impervious gloves, hard hat, splash-proof goggles, impervious clothing, i.e., chemically impermeable suit, self contained breathing apparatus.	
Spill Mitigation Procedures	
Air Release: Vapors may be suppressed by the use of water fog. Contain all liquid for treatment or neutralization.	
Water Release: Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so. Continue to handle as described in land spill.	
Land Release: Create a dike or trench to contain materials. Absorb spill with inert material (e.g. dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Do not place spill materials back in their original containers. Dilute spilled materials with large amounts of water.	
Additional Spill Information: Stop sources of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section XIII, Disposal consideration.	

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. Avoid skin and eye contact. Avoid breathing vapors if generated. 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	Wear impervious gloves, boots and apron to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body.
Respiratory Protection	NIOSH approved air purifying respirator with organic vapor cartridge and dust/mist filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.
Ventilation	Local exhaust ventilation or other engineering controls are necessary when handling or using this product.
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	Negligible	Specific Gravity (gm/cc)	1.02

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Volume(PBV) or Weight (PBW)			
VOC Content (less water) Note 1	No Data	Weight per Gallon	8.5 lbs
Boiling Point	No Data	Evaporation Rate	No Data
Vapor Pressure (mm Hg)	No Data	Solubility in Water	complete
Vapor Density (Air=1)	>1	Appearance and Odor	liquid with ammonical odor

Section 10. Stability and Reactivity	
Stability	Stable
Conditions to Avoid	Oxidizing agents. Contact with water. High temperatures. Isocyanates.
Incompatibility	Acids, strong oxidizing agents.
Hazardous Decomposition Products	Ammonia, carbon dioxide, carbon monoxide, oxides of nitrogen.
Hazardous Polymerization	Mixing large quantities of polyamines and diisocyanates will generate significant heat. Uncontrolled cure conditions may char and decompose the resultant polymer generating unidentified toxic fumes and vapors.

Section 11. Toxicological Information Acute Toxicity (see Section 3. for Exposure Symptomts)			
Chemical Identity	ORAL LD 50	DERMAL LD 50	Inhalation LC 50
	No Data	No Data	No Data

Section 12. Ecological Information	
No information available	

Section 13 Disposal Considerations	
<p>CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES, AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NON HAZARDOUS WASTES.</p> <p>If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is listed as a hazardous waste under Subpart D. As a non-hazardous waste, it should be disposed of in accordance with local, state and federal regulations. No components subject to land ban restrictions.</p>	

Section 14 Transportation Information	
THIS MATERIAL IS NOT REGULATED BY DOT.	
Land (U.S.DOT): Liquid Plastic N.O.I.	
Water (IMO)	SAME AS LAND
Air (IATA/ICAO)	SAME AS LAND
Identification	N/A
Packing Group	N/A
Label	None

Section 15. Regulatory Information	
<i>Regulations Governing Product:</i>	
Inventory Status: United States (TSCA) – The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.	
SARA TITLE III	
Hazard Categories Sections 311/312 (40 CFR 370.2): Health : None Physical : None.	

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HMIS Rating	Health 1	Flammability 1	Chemical Reactivity 0	
<i>Regulations Governing Ingredients</i>				
<i>Chemical Name</i>	<i>CAS #/ Category#</i>	<i>CERCLA RQ</i>	<i>EPCRA 313 RQ</i>	<i>EPCRA 302 RQ EHS</i>

Section 16 Other Information

REFERENCES

CRC Press: Handbook of Chemical and Physical Constants by David R. Lide

Merck & Company: The Merck Index

Sigma-Aldrich Company: Aldrich Handbook of Fine Chemicals

Dictionary of Toxicology by Robert Lewis

US Department of Transportation, Research and Special Programs Administration: Hazardous Materials Table

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