



MATERIAL SAFETY DATA SHEET
IMTECH STR-H-35 Hardener
(For STR-2100 & PVC Adhesive)

Section 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Products Name: STR-H-35
Chemical Family: Isocyanate
Chemical Name: Isocyanate dissolved in solvent.
Applications: Rubber Adhesive curative accelerator.
Supplier's Name: IMTECH Rubber Products, Division of RAM Enterprise, Inc.
1355 W. Main St. Elko, NV. 89801
Phone: (800) 738-0308 Fax: (877) 638-0308
Prepared by: IMTECH Rubber Products
Revision Date of MSDS: June 02, 2010
24 Hour Emergency Telephone Number: **800-255-3924**

Section 2- COMPOSITION / INFORMATION ON INGREDIENTS

	CAS No.	Percentage (W/W)	Exposure Limits	
			ACGIH	OSHA
Ethyl Acetate	141-78-6	60 - 90	400 ppm TLV	400 ppm TWA
Tris (4-isocyanatophenyl) Thiophosphate	4151-51-3	10 - 30	0.005 ppm TLV	N.A.
Monochlorobenzene	108-09-7	1 - 5	N.A.	N.A.

Section 3 - HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: High vapor concentration will cause eye irritation, tearing, reddening, and swelling. Left untreated, corneal damage may result.

Skin Contact: Repeated or prolonged contact may cause defatting and drying of the skin which may result in skin irritation and dermatitis.

Inhalation: Isocyanate vapor/mists at concentrations above the exposure limits can irritate (burning sensation) the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, difficult breathing and reduced pulmonary functioning. Persons with pre-existing non specific bronchial hyper reactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema. Effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms have also been reported. These symptoms can be delayed up to several hours after exposure. Solvent vapors may be irritating to the eyes, nose and throat. May cause headache, dizziness and nausea. May result in narcosis. May cause fatigue and loss of appetite.



Ingestion: Harmful if swallowed. Causes irritation of the mouth, throat and esophagus. May result in abdominal pain, nausea, vomiting and diarrhea.

Chronic Exposure Effects: Prolonged contact may cause reddening, swelling, rash, scaling, blistering and in some cases skin sensitization. Prolonged or repeated skin contact may result in dry, defatted and cracked skin causing increased susceptibility to infection. Repeated or prolonged contact with eyes may cause conjunctivitis. As a result of previous repeated overexposure or a single large dose, certain individuals develop sensitization which will cause them to react to a later exposure to product at levels well below the TLV. Symptoms including chest tightness, wheezing, cough, shortness of breath or asthma attack could be immediate or delayed. There are reports that once sensitized, an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Prolonged or repeated exposure may cause lung damage, including a decrease in lung function. May cause permanent brain and nervous system damage. Symptoms include loss of memory, low of intellectual ability and loss of coordination. Possible damage to liver and kidneys.

Section 4 - FIRST AID MEASURES

Eye Contact: Immediately flush eyes with gently flowing water for at least 15 minutes or until the chemical is removed. Hold eyelids open during flushing. Take care not to rinse the contaminated water into the unaffected eye or face. Seek immediate medical attention.

Skin Contact: Remove contaminated clothing, including shoes, after flushing with water has begun. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention.

Inhalation: If symptoms are experienced, remove source of contamination and, move victim to fresh air. If symptoms persist, get medical attention. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. In situations where administering oxygen is appropriate, first aid administrator must be trained in the safe use and handling of oxygen. It is preferable to administer oxygen under a doctor's supervision or advice. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Obtain medical attention IMMEDIATELY.

Ingestion: Seek immediate medical attention. Do NOT Induce vomiting. Do not attempt to give anything by mouth to an unconscious or convulsing person. Give 1 to 2 cups of milk or water to drink. IMMEDIATELY contact local Poison Control Centre. If spontaneous vomiting occurs, have victim lean forward with head down to avoid aspirating the liquid into the lungs. Administer artificial respiration if breathing has stopped. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately.

Note to Physician: Treatment based on sound judgment of physician and individual reactions of patient.
EYE: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision.
SKIN: This compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn.
INGESTION: Treat symptomatically. There is NO specific antidote. Inducing vomiting is contraindicated because of the irritation nature of this compound.

RESPIRATORY: This compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed immediately from exposure to any isocyanate.

Section 5 - FIRE FIGHTING MEASURES

Flash Point:	-4 °C
Flash Point Method:	(Closed cup)
Auto Ignition Temp:	460 °C
Flammable Limits in air (%):	Lower: 1.3% Upper: 11.5%
Extinguishing Media:	Use DRY Chemicals. CO2. alcohol foam or water spray. This material may produce a floating fire hazard in extreme fire conditions.
Special Exposure Hazards:	Flammable Liquid. Isolate and restrict area access. Stop leak only if safe to do so. Move containers from fire area if you can do so without risk. Fight fire from a safe distance and from a protected location. Use fine water spray or fog to control fire spread and cool adjacent structures or containers. This material may produce a floating fire hazard in extreme fire conditions. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations. Do not allow runoff to enter waterways or sewer.
Hazardous Decomposition/ Combustion Materials:	A Complex mixture of airborne solids, liquids, gases including carbon monoxide, carbon dioxide, oxides of nitrogen, phosphorous, sulphur, HCL, isocyanates and traces of phosgene, chlorine and hydrogen cyanide will be evolved when this material undergoes combustion.
Special Protective Equipment:	Wear protective clothing and self-contained breathing apparatus.
NFPA RATINGS:	HEALTH 2; FLAMMABILITY 3; INSTABILITY: 0
HMIS RATINGS:	HEALTH 2; FLAMMABILITY 3; INSTABILITY: 0

Section 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures:	Wear appropriate protective equipment
Environmental Precautionary Measures:	Prevent entry into sewers or streams, dike if needed. Consult Local authorities.
Procedure for Clean Up:	Flammable liquid. Isolate hazard area and restrict access. Stop leak only if it is safe to do so. Eliminate all sources of ignition and work only with non-sparking tools. Small Spills: soak up with non-combustible absorbent material and scoop into containers. Large Spills: Prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material. Place in appropriate container. Confirm suitability of any material before using. Notify applicable government authority if release is reportable or could adversely affect the environment. Ventilate the area thoroughly.

Section 7 – HANDLING AND STORAGE

Handling:	Flammable. For Industrial Use Only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. DO NOT handle or store near an open flame, heat, or other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. DO NOT pressurize, cut, heat or weld containers. Empty containers may contain hazardous product residues. Keep the containers closed when not in use.
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Protect against physical damage. Use appropriate personal protective equipment. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≥ 10 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Extinguish any naked flames.

Storage:

Store in a cool, dry, well ventilated area, away from heat and ignition sources. Keep containers tightly closed. Store out of direct sunlight and on an impermeable floor.

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Local exhaust ventilation as required to maintain exposure to within applicable limits. Use explosion proof equipment. Make up air should be supplied to balance air that is removed by local or general exhaust ventilation. Ventilate low lying areas such as sumps or pits where dense vapors may collect.

Respiratory Protection:

If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator. In case of spill or leak resulting in unknown concentration, use a NIOSH approved supplied air respirator.

Gloves:

Impervious chemical resistant gloves. Butyl or nitrile rubber gloves.

Skin Protection:

Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

Eyes:

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Personal Protective Data:

Ensure that eyewash stations and safety showers are proximal to the work station location.

Ingredients

	Exposure Limit ACGIH	Exposure Limit OSHA	Immediately Dangerous to Life or Health – IDLH
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Ethyl Acetate

=400 ppm TWA

400 ppm TWA

2,000 ppm

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State:

Liquid.

Color:

Yellow to brown amber.

Odor:

Solvent odor.

Specific Gravity:

1.0 (water = 1)

Boiling Point:

77°C

Melting/Freezing Point:

Not available

% Volatility:

Not available

Vapor Pressure:

73 mm Hg.) @ 20°C

Vapor Density:

Not applicable

Viscosity:

Not available

Odor threshold:

Not available

Solubility:

Partially soluble in water. Isocyanate: not soluble, reacts slowly with water to liberate CO₂ gas.

Evaporation Rate:

Not available.



Section 10 – STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions.
Hazardous Polymerization:	May occur with contact with moisture or other materials which react with isocyanates..
Conditions to Avoid:	High temperatures, sparks, open flames and all sources of ignition.
Materials to Avoid:	Water, oxidizing agents, strong bases, strong alkalis, alcohols and strong acids
Hazardous decomposition Products:	By fire: Oxides of carbon, nitrogen, phosphorous, sulphur, and, hydrochloric acid, isocyanates, traces of phosgene, chlorine and hydrogen cyanide.

Section 11 – TOXICOLOGICAL INFORMATION

Principle Routes of Exposure:

Eye Contact:	High vapor concentration will cause eye irritation, tearing, reddening, and swelling. Left untreated, corneal damage may result.
Skin Contact:	Repeated or prolonged contact may cause defatting and drying of the skin which may result in skin irritation and dermatitis.

Inhalation: Isocyanate vapor/mists at concentrations above the exposure limits can irritate (burning sensation) the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, difficult breathing and reduced pulmonary functioning. Persons with pre-existing non specific bronchial hyper reactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema. Effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms have also been reported. These symptoms can be delayed up to several hours after exposure. Solvent vapors may be irritating to the eyes, nose and throat. May cause headache, dizziness and nausea. May result in narcosis. May cause fatigue and loss of appetite.

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Acute Test of Product:	Ethyl Acetate	Analogous products
Acute Oral LD50:	5,600 mg/kg (Rat)	>2,000 mg/kg (Rat).
Acute Dermal LD50:	> 20 mL/kg. (Rabbit)	Not available.
Acute Inhalation LC50:	16,000 ppm (Rat – 6 hr.)	Not available.

Carcinogenicity:
IARC – Not listed.
ACGIH – Not listed.

Carcinogenicity Comment: No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicological Information:	Ecotoxicity – Fish Species Data	Ecotoxicity Freshwater Algae
Ethyl Acetate:	LC50 (Pimephales promelas) 230 mg/L	EC50 (Scenedesmus subspicatus) 3,300 mg/L
	LC50 (Oncorhynchus mykiss) 484 mg/L	



Section 13 – DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with local, state/provincial and federal regulations.

Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

Section 14 – TRANSPORT INFORMATION

Proper Shipping Name: Flammable Liquid, N.O.S. (Ethyl Acetate Solution)
TDG (IATA and IMO): Cl. 3 UN 1993 PG. II
Hazard Label / Placards: FLAMMABLE

Section 15 – REGULATORY INFORMATION

U.S. TSCA Inventory Status: All compounds of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All compounds of this product are either on the Domestic Substances List (DSL); the Non- Domestic Substances List (NDSL) or exempt.

NFPA RATINGS: HEALTH 2; FLAMMABILITY 3; INSTABILITY: 0

Note: Not available.

US Regulatory Rules	CECLA/SARA Section 302:	SARA (311,312) Hazard Class:	CERCLA/SARA Section 313:
RE Hardener components	Not Listed	Listed	Listed
California Proposition 65: MA	Listed		
Right to Know List: New	Listed		
Jersey Right-to-know List:	Listed		
Pennsylvania Right to Know	Listed		
WHMIS Hazardous Class:	B2 FLAMMABLE LIQUIDS D2A TOXIC MATERIALS		

HMIS RATINGS: HEALTH 2; FLAMMABILITY 3; INSTABILITY: 0

Section 16 – OTHER INFORMATION

All employees or contractors etc. who use this product must have access to this Material Safety Data Sheet.

This information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of Normac Adhesive Products Inc. knowledge or is obtained from sources believed by Normac Adhesive Products Inc. to be accurate. Normac Adhesive Products Inc. makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use or reliance on same. Customers are encouraged to conduct their own tests.

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END OF MSDS MSDS Code: