

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name: Bonding Adhesive
Chemical Name: Synthetic Rubber/Resin in Solvent
CAS Number: Blend

Company Identification

ERSystems, Inc.
6900 Bleck Dr.
Rockford, MN 55373 USA
1-800-403-7747 (For product information)
1-800-535-5053 (For emergencies)

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT LISTING:

<u>Chemical Name</u>	<u>Amount</u>	<u>CAS Number</u>
TOLUENE	37.0 %	108-88-3
ACETONE	20.0 - 24.0 %	67-64-1
LIGHT ALIPHATIC SOLVENT NAPHTHA (PETROLE	13.0 - 17.0 %	64742-89-8
SYNTHETIC RUBBER	13.0 - 17.0 %	
PHENOLIC RESIN	2.0 - 6.0 %	
AROMATIC HYDROCARBON RESIN	1.0 - 5.0 %	
HYDROCARBON RESIN	1.0 - 5.0 %	
HEXANE	4.5 %	110-54-3

(See Section 8 for exposure guidelines)

(See Section 15 for regulatory information)

3. HAZARDS IDENTIFICATION

HMIS Rating - Health: *2
Flammability: 3
Reactivity: 0



(section 3 continued)

NFPA/HMIS Definitions: (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

POTENTIAL HEALTH EFFECTS

EYE:

May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

SKIN:

Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

INHALATION:

Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.

INGESTION:

Small amounts swallowed during normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

SIGNS AND SYMPTOMS OF EXPOSURE:

Signs and symptoms of exposure to this material may include: stomach or intestinal upset, irritation (nose, throat, airways), central nervous system depression, temporary change in mood and behavior, irregular heartbeat, and death.

CARCINOGENICITY INFORMATION:

Ethylbenzene has been shown to cause cancer in laboratory animals. the relevance of this finding to humans is uncertain. IARC has classified ethylbenzene as a possible human carcinogen.



(section 3 continued)

TARGET ORGAN:

Prolonged and repeated exposure to n-hexane may cause peripheral neuropathy by damaging peripheral nerve tissue and result in muscular weakness and loss of sensation. Prolonged and repeated inhalation of high levels of mixed isomers of hexane resulted in kidney damage in male rats. The effects observed are the same as those seen in male rats exposed to other hydrocarbons. The mechanism by which these chemicals cause the characteristic kidney toxicity is unique to the male rat and the kidney effects are not expected to occur in humans. Prolonged intentional toluene abuse may lead to hearing loss progressing to deafness. Overexposure to this material has been suggested as a cause of the following effects in laboratory animals: liver abnormalities, spleen damage, eye damage, kidney damage, effects on hearing, testis damage, lung damage, central nervous system damage.

4. FIRST AID MEASURES

EYE CONTACT FIRST AID:

Flush eye with water for 15 minutes. Get medical attention.

SKIN CONTACT FIRST AID:

Remove contaminated clothing and shoes. Wash affected area immediately with large amounts of soap and water. Get medical attention if irritation develops or persists. Wash clothing before reuse.

INHALATION FIRST AID:

Remove from area of exposure. Seek immediate medical attention.

INGESTION FIRST AID:

If swallowed, do NOT induce vomiting. Prevent aspiration of liquid into lungs by keeping head below hips. If individual is drowsy or unconscious, place on left side with head down. Get immediate medical attention.

NOTES TO PHYSICIAN:

This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.



5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

TCC Flash Point: -18.8 C (-1.8 F)
Autoignition Temperature: N/A

FLAMMABLE LIMITS IN AIR

LEL: 1 %
UEL: 7 %

EXTINGUISHING MEDIA:

Water fog, carbon dioxide, foam or dry powder.

FIRE & EXPLOSION HAZARDS:

Extremely Flammable. Vapors may ignite, and/or cause flash fires. Eliminate sources of ignition. No smoking. Use adequate ventilation. Vapors can travel to a source of ignition and flash back.

FIRE FIGHTING INSTRUCTIONS:

As in any fire, wear self-contained breathing apparatus pressure-demand MSHA/NIOSH (approved or equivalent) and full protective gear. Avoid breathing smoke, fumes, and decomposition products.

COMBUSTION PRODUCTS:

Degeneration in the presence of air may yield carbon dioxide, carbon monoxide, phenols, and various hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

LARGE SPILLS PROCEDURE:

Keep unnecessary and unprotected personnel from entering. Eliminate all sources of ignition. Contain spilled material. Prevent spilled product from entering streams or drinking water supply. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product into clean containers for recovery. Absorb unrecoverable product. Treat or dispose of waste material in accordance with all local, state/provincial, and national requirements.

SMALL SPILLS PROCEDURE:

Absorb liquid with Vermiculite, floor absorbent, or other absorbent material. Eliminate all sources of ignition.



7. HANDLING AND STORAGE

HANDLING (PERSONNEL):

For industrial use only. Follow label instructions. Do not inhale. Turn off all pilot lights, flames, stoves, heaters, electric motors, and other sources of ignition. Wash hands thoroughly after handling.

HANDLING (PHYSICAL ASPECTS):

Close container after each use. Keep out of reach of children. Empty containers must not be reused for any purpose. Containers may be hazardous when emptied. Never use cutting torch on empty containers. Ground all equipment when handling flammable solvent borne materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below PEL and TLV(s).

EYE / FACE PROTECTION REQUIREMENTS:

Use chemical splash goggles and face shield (ANSI Z87-1 or approved equivalent).

SKIN PROTECTION REQUIREMENTS:

When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material.

RESPIRATORY PROTECTION REQUIREMENTS:

When there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.



(section 8 continued)

EXPOSURE GUIDELINES:

TOLUENE

OSHA PEL: 200 ppm
OSHA TWA: 100 ppm
ACGIH TWA: 50 ppm
OSHA STEL: 150 ppm
ACGIH STEL: 150 ppm
OSHA Ceiling Limit: 300 ppm
Skin Designation: Yes

ACETONE

OSHA PEL: 1000 ppm, 2400 mg/m³
OSHA TWA: 750 ppm, 1800 mg/m³
ACGIH TWA: 750 ppm, 1780 mg/m³
OSHA STEL: 1000 ppm, 2400 mg/m³

HEXANE

OSHA PEL: 500 ppm
OSHA TWA: 50 ppm
ACGIH TWA: 50 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Liquid
COLOR: Yellow
BOILING POINT: 133 F @ 760 mm Hg
VAPOR PRESSURE: 185 mm Hg
VAPOR DENSITY: Heavier than air (Air = 1)
SPECIFIC GRAVITY: 0.872 @ 77F (Water = 1)
BULK DENSITY: 7.26 lbs/gallon @ 77F
% VOLATILES: 73 - 77 %
EVAPORATION RATE: Slower than Ethyl ether
VOLATILE ORGANIC COMPOUNDS (VOC) ...: 659 g/L

10. STABILITY AND REACTIVITY

STABILITY:

Stable.

POLYMERIZATION:

Will NOT undergo hazardous polymerization.



(section 10 continued)

INCOMPATIBILITY WITH OTHER MATERIALS:

Avoid contact with strong alkalis, strong mineral acids, strong oxidizing agents.

DECOMPOSITION:

Thermal degradation in the presence of air may yield carbon dioxide, carbon monoxide, phenols, and various hydrocarbons.

11. TOXICOLOGICAL INFORMATION

No information available.

12. ECOLOGICAL INFORMATION

No information available.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Treat or dispose of waste material in accordance with all local, state/provincial, and national requirements. Residues and spilled material are hazardous waste due to flammability. Law generally requires incineration at an EPA-permitted hazardous waste management facility.

14. TRANSPORTATION INFORMATION

PRODUCT LABEL: Bonding Adhesive
D.O.T. SHIPPING NAME ...: Adhesive
D.O.T. HAZARD CLASS: 3
UN NUMBER: UN 1133, III
PRODUCT RQ (LBS): 2726

15. REGULATORY INFORMATION



(section 15 continued)

Canadian Disclosure List

TOLUENE (108-88-3)
ACETONE (67-64-1)
HEXANE (110-54-3)

SARA Title III - Section 313

TOLUENE (108-88-3)
ACETONE (67-64-1)
HEXANE (110-54-3)

CERCLA Hazardous Substances

TOLUENE (108-88-3) -- RQ 1000 lb
ACETONE (67-64-1) -- RQ 5000 lb

RCRA Hazardous Substances

TOLUENE (108-88-3) -- RCRA Code: U220
ACETONE (67-64-1) -- RCRA Code: U002

Title V

TOLUENE (108-88-3)
ACETONE (67-64-1)

CA Proposition 65

TOLUENE (108-88-3)

SC Toxic Air Pollutants List

TOLUENE (108-88-3)
HEXANE (110-54-3)

16. OTHER INFORMATION

PREPARED BY: Laura Vollenweider
APPROVED BY: Laura Vollenweider
TITLE: Chemist
APPROVAL DATE: October 24, 2005
SUPERCEDES DATE ...: December 29, 2004
MSDS NUMBER: YBA0000-005
RTN NUMBER: 00000081 (Official Copy)

ADDITIONAL INFORMATION:

The data in this Material Safety Data Sheet relates only to the specific material designated herein.



To the best of our knowledge, the information contained in this MDS is accurate. It is intended to assist the user in his evaluation of the products hazards, and safety precautions to be taken in its use. The data in this MSDS relates only to the specific material designated herein. We do not assume liability for the use of, or reliance on this information, nor do we guarantee its accuracy or completeness.

END OF MSDS

