

Material Safety Data Sheet

MULE-HIDE LOW VOC BONDING ADHESIVE

Date of Preparation: 5/15/2009

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: LOW VOC BONDING ADHESIVE

Chemical Formula: Mixture **General Use:** Contact Bonding Adhesive for EPDM and TPO

Supplier: Mule-Hide Products Co., Inc. 1195 Prince Hall Dr, Beloit, WI 53511, Phone: 800-479-6832

Manufacturer: Carlisle SynTec Incorporated, 1285 Ritner Highway, Carlisle, PA 17013, Phone: 800-479-6832

Emergency Phone Number: CHEMTREC (USA) 800-424-9300

Section 2 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Danger – Highly flammable liquid and vapor

Warning – Causes skin irritation

Warning – Causes eye irritation

Warning – May be harmful if swallowed and enters airways

Danger – May damage fertility or the unborn child

Warning – May cause an allergic skin reaction

Warning – May cause drowsiness and dizziness

Warning – May cause damage to organs (liver, kidney, ear) through prolonged or repeated exposure

Potential Health Effects

Primary Entry Routes: Skin contact, skin absorption, eye contact, inhalation, ingestion.

Target Organs:

Acute Effects

Inhalation: Throat irritation on short-term exposure to liquid or vapor. Aspiration into lungs can cause chemical pneumonitis which can be fatal.

Eye: Irritation on short-term exposure to liquid or vapor

Skin: Irritation on short-term exposure to liquid or vapor

Ingestion: Ingestion can cause irritation to gastrointestinal tract

Carcinogenicity: IARC, NTP, and OSHA do not list this product as a carcinogen.

Medical Conditions Aggravated by Long - Term Exposure: Respiratory symptoms associated with pre-existing lung disorders and pre-existing heart disorders may be aggravated by exposure to this material.

Chronic Effects: Overexposure may result in headache, dizziness, fatigue, nausea, and possible unconsciousness, even asphyxiation. Moderate irritation of skin, eyes, and mucous membranes of upper respiratory tract on prolonged/repeated contact. Dermatitis and defatting of the skin. Chronic exposure may cause reversible liver and kidney injury. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Repeated exposure to Toluene has been associated with high frequency hearing loss based on animal tests.

HMIS

H 1

F 4

R 0

PPE†

†Sec. 8

Section 3 – Ingredient Information

Hazardous Ingredients	CAS Number	% wt
Acetone	67-64-1	5 – 10
Parachlorobenzotrifluoride (PCBTF)	98-56-6	30 – 60
Toluene	108-88-3	10 – 30
Magnesium Oxide	1309-48-4	0.5 – 1.5
Additional Ingredients	CAS Number	% wt
Polychloroprene	Proprietary	
Synthetic Rubber	Proprietary	
Phenolic Resin	Proprietary	

Section 4 - First Aid Measures

Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention immediately.

Eye Contact: Immediately flush eyes with running water for at least 15 minutes. Get medical attention.

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Skin Contact: Immediately flush skin with running water and remove contaminated clothing. Wash exposed area with soap and water. Get medical attention.

Ingestion: Do not induce vomiting. Get medical attention immediately.

After first aid, get appropriate inplant, paramedic, or community medical support.

Special Precautions/Procedures: Whenever possible, remove the worker from the source of contamination.

Section 5 - Fire-Fighting Measures

Flash Point: 0°F (-17 °C)

Flash Point Method: CC

Autoignition Temperature: 869 °F (465 °C)

LEL: 0.9% v/v

UEL: 12.8% v/v

Flammability Classification: Division 2

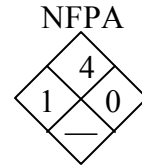
Extinguishing Media: In case of fire, use dry chemical, carbon dioxide, or foam. Water may not be effective as an extinguishing agent. Water fog or spray may be used to provide a smothering effect on fire and to cool fire-exposed container and surrounding combustibles. Do not use a solid stream of water because it can scatter and spread the fire.

Unusual Fire or Explosion Hazards: Extremely flammable. Store and use away from all sources of heat, flame, or sparks. Do not smoke while applying. Vapors are heavier than air and may travel along ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at location distant from material handling point and flash back. All containers should be grounded when material is transferred.

Hazardous Combustion Products: Toxic gases or vapors, such as carbon monoxide, carbon dioxide, or oxides of nitrogen may be released in a fire.

Fire-Fighting Instructions: This product contains solvents that are dangerous fire and explosion hazards when exposed to heat or flame. Fire fighters should wear self-contained breathing apparatus and full protective clothing with a full face piece operated in the positive-pressure demand mode.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.



Section 6 - Accidental Release Measures

Spill /Leak Procedures: Remove all sources of ignition. Avoid breathing vapors. Use self-contained breathing apparatus in enclosed area. Ventilate area. Contain and remove with inert absorbent materials and non-sparking tools.

Large Spills

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: Clean-up spill as soon as possible. Collect any excess material with absorbent pads, sand or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal. Comply with all laws and regulations.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Use away from all sources of heat, flame, or sparks. Do not smoke while using. Handling equipment must be grounded to prevent sparking. Handle with non-sparking tools. Wash with soap and water before eating or drinking. Launder contaminated clothing. KEEP OUT OF REACH OF CHILDREN.

Storage Requirements: Keep containers cool, dry, and store away from all sources of heat, flame, and sparks. Keep containers tightly closed and store with adequate ventilation. Do not pressurize, cut, weld, or grind the containers or empty containers which may contain residual product and solvent vapors that may ignite explosively.

Section 8 - Exposure Controls / Personal Protection

Hazardous Ingredients:

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Acetone	1000 ppm	1000 ppm	500 ppm	750 ppm	250 ppm	None estab.	2500 ppm
Parachlorobenzotrifluoride (PCBTf)	20 ppm	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.
Toluene	200 ppm	150 ppm	20 ppm (skin)	None estab.	100 ppm	150 ppm	500 ppm
Magnesium Oxide	10 mg/m ³ (as dust)	None estab.	10 mg/m ³	None estab.	10 mg/m ³	None estab.	750 mg/m ³

Engineering Controls: Do not use in enclosed areas without proper explosion-proof ventilation. General and local exhaust ventilation must be sufficient to control vapor concentrations and keep the PEL below 100 ppm.

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Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Respiratory Protection: A NIOSH approved respirator must be used if vapor concentration is 100 ppm or above.

Protective Clothing/Equipment: Permeation resistant gloves (that meet ANSI/ISEA 105-2005) recommended. Glasses or goggles recommended. Industrial shoes to protect feet from adhesive contact. Long sleeves, long trousers to protect skin from adhesive contact. Protective skin creams or emollients useful.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in workareas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Yellowish liquid with strong hydrocarbon odor.

Odor Threshold(ppm): Not available.

Vapor Pressure: 5-400 mm Hg

Vapor Density (Air=1): 2.0-5.3

Specific Gravity (H₂O=1, at 4 °C): 1.13

Water Solubility: Negligible

Other Solubilities:

Boiling Point(°C): 56-139 (133 - 282°F)

Freezing/Melting Point(°C): -36 (-33°F)

% Volatile: 79.7

Evaporation Rate: 0.9-8.3

VOC: 250 g/L maximum

Flash Point: 0°F (-17 °C)

Flash Point Method: CC

Autoignition Temperature: 869 °F (465 °C)

LEL: 0.9% v/v

UEL: 12.8% v/v

Section 10 - Stability and Reactivity

Stability: Stable.

Possibility of Hazardous Reactions: Will not occur.

Chemical Incompatibilities: Strong oxidizing agents, acids, bases.

Conditions to Avoid: Heat, sparks, and flames; ignition sources.

Hazardous Decomposition Products: Toxic gases or vapors such as carbon monoxide, carbon dioxide, or oxides of nitrogen may be released in a fire.

Section 11- Toxicological Information

Toxicity Data:

Eye Effects: Irritating

Skin Effects: Irritating

Acute Inhalation Effects: Product toxicity has not been determined.

Following are the component data:

TC₅₀:

Toluene: Rat > 26,700 ppm 1 hr; Mouse 400 ppm 24 hr

Acetone: Rat > 20,700 ppm 8 hr

PCBTf: Rat = 4479 ppm

Acute Oral Effects: Product toxicity has not been determined.

Following are the component data:

LD₅₀:

Toluene: Rat 5000 mg/kg

Acetone: Rat 5800 mg/kg

Mouse 3000 mg/kg

Rabbit 5340 mg/kg

PCBTf: Rat > 6800 mg/kg

Chronic Effects: May cause skin sensitization in some people.

Carcinogenicity: Not listed in IARC or NTP.

Mutagenicity: Some evidence in animal exposure to Toluene.

Teratogenicity: Some evidence in animal exposure to Toluene.

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Section 12 - Ecological Information

Ecotoxicity: Not known
Environmental Fate: Not known
Environmental Degradation: Not known
Soil Absorption/Mobility: Not known

Section 13 - Disposal Considerations

Disposal: Dispose of in accordance with all local, state, and federal regulations.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Adhesives, 3, UN1133, II	Packaging Authorizations	Quantity Limitations
Shipping Symbols: Flammable	a) Exceptions: 173.150	a) Passenger, Aircraft, or Railcar: 5L
Hazard Class: 3	b) Non-bulk Packaging: 173.173	b) Cargo Aircraft Only: 60L
ID No.: UN 1133	c) Bulk Packaging: 173.242	
Packing Group: II		Vessel Stowage Requirements
Label: Red caution label required.		a) Vessel Stowage: B
Special Provisions (172.102): 149, B52, IB2, T4, TP1, TP8		b) Other: --

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed

RCRA Hazardous Waste Classification (40 CFR 261): Not classified

TSCA (Toxic Substances Control Act) Status:

TSCA (United States) – The intentional ingredients of this product are listed.

CERCLA Hazardous Substance RQ – 40 CFR 302.4 (a)

<u>Component</u>	<u>RQ (lbs)</u>
Toluene	1000
Acetone	5000

CERCLA RQ – 40 CFR 302.4 (b)

Materials with a “listed” RQ may be reportable as an “unlisted hazardous substance”. See 40 CFR 302.5 (b).

SARA 311/312 Codes:

Immediate (X) Delayed (X) Fire (X) Reactive () Sudden Release of Pressure ()

SARA 313 Components (40 CFR 372.65):

<u>Section 313 Component(s)</u>	<u>CAS Number</u>	<u>%</u>
Toluene	108-88-3	10 – 30

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z -1, Z-1-A): Not listed
OSHA Specifically Regulated Substance (29 CFR 1910): None listed

EPA Accidental Release Prevention (40 CFR 68): None listed

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State Regulations:

California Proposition 65:

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the State of California to cause reproductive harm:
Toluene

Delaware Air Quality Management List:

Chemical Name	DRQ:	State?
Toluene	1000	Must be reported to the DRQ
Acetone	5000	Must be reported to the DRQ

Massachusetts Hazardous Substances List:

Chemical Name	CAS #	Codes
Toluene	108-88-3	2, 4, 5, 6, F7, F8
Acetone	67-64-1	2, 4, 5, 6, F8, F9

Michigan Critical Materials Registry:

Chemical Name	CAS #	Report	Class
Toluene	108-88-3	--	--

Minnesota Hazardous Substance:

Chemical Name	Codes	Hazards	Carcinogen?
Toluene	ANO	skin	No
Acetone	AON	--	No

New Jersey RTK Label Information:

Chemical Name	CAS #	Substance #	DOT #	TPQ	EHS
Toluene	108-88-3	1866	1294	--	

New York List of Hazardous Substances:

Chemical Name	RQ – Air	RQ – Land	Note
Toluene	1000	1	none
Acetone	5000	1	none

Pennsylvania RTK Label Information

Chemical Name	CAS #	Code
Benzene, Methyl	108-88-3	E
2-Propanone	67-64-1	E

Washington Air Contaminant:

TWA (ppm):	100 (Toluene)	750 (Acetone)
TWA (mg):	375 (Toluene)	1800 (Acetone)
STEL (ppm):	150 (Toluene)	1000 (Acetone)
STEL (mg):	560 (Toluene)	2400 (Acetone)
Ceiling (ppm):	None listed	
Ceiling (mg):	None listed	
Skin:	None listed	

Section 16 - Other Information

Prepared By: Research & Development

Revision Notes: Product review.

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