Material Safety Data Sheet

ECH LAP SEALANT **MSDS No. 302173**

Date of Preparation: 09/01/2008 Revision: 018

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: ECH LAP SEALANT
Chemical Formula: Mixture
General Use: Lap Sealant
Manufacturer: Versico, LLC, 1285 Ritner Highway, Carlisle, PA 17013, Phone: 800-992-7663
24-Hour 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 serious 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 – Suspected of causing genetic defects (skin)
Warning – May cause drowsiness and dizziness
Warning – May cause damage to organs (liver, kidney, ear) through prolonged or repeated exposure

HMIS	
H	2
F	4
R	0
PPE†	

†Sec. 8

Potential Health Effects

Primary Entry Routes: Inhalation, Skin absorption, Skin contact, Ingestion.

Target Organ Effects:

This material (or a component) shortens the time of onset or worsens the liver and kidney damage induced by other chemicals. This material (or a component) shortens the time of onset or worsens the neurotoxic effects induced by other chemicals. Exposure to lethal concentrations of methanol has been shown to cause damage to organs including liver, kidneys, pancreas, heart, lungs and brain. Although this rarely occurs, survivors of severe intoxication may suffer from permanent neurological damage. Prolonged intentional toluene abuse may lead to damage to many organ systems having effects on: central and peripheral nervous systems, vision, hearing, liver, kidneys, heart and blood. Such abuse has been associated with brain damage characterized by disturbances in gait, personality changes and loss of memory. Comparable central nervous system effects have not been shown to result from occupational exposure to toluene. Prolonged intentional toluene abuse may lead to hearing loss progressing to deafness. In addition, while noise is known to cause hearing loss in humans, it has been suggested that workers exposed to organic solvents, including toluene, along with noise may suffer greater hearing loss than would be expected from exposure to noise alone. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects; mild, reversible kidney effects, cardiac sensitization, respiratory tract damage (nose, throat and airways), testis damage, kidney damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: central nervous system effects, cardiac sensitization, visual impairment, and kidney damage.

Acute Effects

Inhalation:

Breathing of vapor or mist is possible. Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8). Prolonged or repeated breathing of dust may result in progressive and permanent lung disease (fibrosis), which may cause death from respiratory and/or heart failure. Symptoms include coughing and difficult breathing, which becomes worse with physical activity.

Eye:

Can cause severe eye irritation. Symptoms include stinging, tearing, redness and swelling of eyes. Can injure eye tissue.

Skin:

Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of the skin, burns and other skin damage. Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

Ingestion:
Swallowing this material may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Symptoms of Exposure:
Signs and symptoms of exposure to this material through breathing, ingestion and/or passage of the material through the skin may include: metallic taste, mouth and throat irritation (soreness, dry or scratchy feeling, cough), stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), tight feeling in the chest, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, temporary changes in mood and behavior, leg cramps, muscle weakness, pain in the abdomen and lower back, respiratory depression (slowing of the breathing rate), blurred vision, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), narcosis (dazed or sluggish feeling), visual impairment (including blindness), respiratory failure, coma and death.

Carcinogenicity:
This material (or a component) is listed as a carcinogen by the International Agency for Research on Cancer (IARC). In a study conducted by the National Toxicology Program (NTP), di (2-ethylhexyl) adipate caused liver tumors in female mice when fed to the animals for two years. There was an increase in tumors in male mice, however it was not clearly related to di (2-ethylhexyl) adipate exposure. It did not cause an increase in tumors in either male or female rats in the same study. The relevance of this study to humans is uncertain. There is no evidence that this chemical causes cancer in humans. Di (2-ethylhexyl) adipate is not listed as a carcinogen by NTP, IARC or the Occupational Safety and Health Administration (OSHA). 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. IARC and NTP have determined that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite. In addition, IARC has determined that there is sufficient evidence for the carcinogenicity of quartz and cristabolite in experimental animals. Among individuals with silicosis, lung cancer occurs more frequently in those who smoke.

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: Prolonged contact with skin can cause moderate irritation and dermatitis. Excessive inhalation of vapors can cause nasal and respiratory irritation and dizziness, weakness, fatigue nausea, headache, unconsciousness, and even death. Overexposure has caused damage to kidney, liver, eye, spleen, lung, brain, and nervous system in animals, and may cause eye damage, cardiac, liver, central nervous system abnormalities in humans.

Section 3 – Ingredient Information

Hazardous Ingredients	CAS Number	**% wt**
Toluene	108-88-3	10 – 30
Xylene	1330-20-7	5 – 10
Cyclohexanone	108-94-1	1 – 5
Methyl Alcohol	67-56-1	1– 5
Methyl Isobutyl Ketone	108-10-1	3 – 7
Aliphatic Hydrocarbons	8052-41-3	7 – 13
Ethyl Benzene		
Additional Ingredients	CAS Number	**% wt**
Quartz	14808-60-7	0.1 – 1
Aluminum	7429-90-5	1 – 5
Dioctyl Adipate	103-23-1	1 – 5
Synthetic Rubber	Not Available	10 – 30
Phenolic Resin	Not Available	10 – 30

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:
If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin Contact:
Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion:
DO NOT induce vomiting. Get medical attention immediately. Aspiration of material into lungs due to vomiting can cause chemical pneumonitis, which can be fatal. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down.

Note to Physicians:
Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This product contains methanol, which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis. Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be used as an antidote in the treatment of ethylene glycol, diethylene glycol and methanol poisoning. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3 – Swallowing) when deciding whether to induce vomiting. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: respiratory tract, skin, lung (for example, asthma-like conditions), liver, kidney, central nervous system, pancreas, heart, male reproductive system, auditory system. Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias. Individuals with preexisting heart disorders may be more susceptible to arrhythmias (irregular heartbeat) if exposed to high concentrations of this material. Silicosis predisposes the individual to the development of tuberculosis. This is most likely to occur after the age of 50 and in association with moderate to severe silicosis.

Section 5 - Fire-Fighting Measures

Flash Point: 50°F (10°C)
Flash Point Method: Tag CC
NFPA Rating: Not Determined
Autoignition Temperature: No data.
LEL: 0.4% v/v
UEL: 36.0% 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 containers and surrounding combustibles.

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 flashback. All containers should be grounded when material is transferred.

Hazardous Combustion Products: May form toxic materials such as carbon dioxide, carbon monoxide, various hydrocarbons, or phenols 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.

Small Spills: Eliminate all sources of ignition such as flares, flames (including pilot lights) and electrical sparks. Absorb liquid on vermiculite, floor absorbent or other non-combustible absorbent material.

Large Spills: Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

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 way 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:

	OSHA PEL			
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**
Toluene	200 ppm	150 ppm	50 ppm (skin)	150 ppm (skin)
Xylene	100 ppm	150 ppm	100 ppm	150 ppm
Cyclohexanone	50 ppm	None estab.	25 ppm	None estab.
Methyl Alcohol	200 ppm	250 ppm	200 ppm	250 ppm
Methyl Isobutyl Ketone	100 ppm	75 ppm	50 ppm	75 ppm
Aliphatic Hydrocarbons	500 ppm	None estab.	100 ppm	None estab.
Quartz	0.1mg/m^3 (as dust)	None estab.	0.050 mg/m3 (for respirable fractin of dust)	None estab.
Aluminum	5.0mg/m^3	None estab.	None estab.	None estab.
Dioctyl Adipate	None estab.	None estab.	None estab.	None estab.
Ethyl Benzene	100 ppm	125 ppm	100 ppm	125 ppm

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 vapor concentration below 100 ppm.

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:

Eye Protection:

Chemical splash goggles in compliance with OSHA regulations (29 CFR 1910.133) should be worn whenever handling or transferring material. Contact lenses are not protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Skin Protection:

Permeation resistant gloves (that meet ANSI/ISEA 105-2005) recommended. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas. Engineering or administrative controls should be implemented to reduce exposure.

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 work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. KEEP OUT OF REACH OF CHILDREN!

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance and Odor: Aluminum colored mastic with strong solvent odor.
Odor Threshold: Not available
Vapor Pressure: 14mm Hg at 20 °C (68°F)
Vapor Density (Air=1): 3.8
Liquid Density: 8.34 lb/gal @ 77°F (1 kg/L @ 25°C)
Specific Gravity (H_2O=1, at 4°C-39°F): 1.000 @ 77°F/25°C
pH: N/A

Water Solubility: Negligible
Boiling Point (°C): 64 at 760 mm Hg
Freezing/Melting Point(°C): -45 (-49°F)
% Volatile: 40-45
Evaporation Rate (nBuAc=1): slower than ethyl ether
VOC: 400 – 450 gpl
Flash Point: 50°F (10°C)
Flash Point Method: Tag CC
NFPA Rating: Not Determined
Autoignition Temperature: No data.
LEL: 0.4% v/v
UEL: 36.0% v/v

Section 10 - Stability and Reactivity

Stability: Stable.
Possibility of Hazardous Reactions: No data.
Chemical Incompatibilities: No data.
Conditions to Avoid: Heat, sparks, and flames; ignition sources.
Hazardous Decomposition Products: Toxic vapors and gases, such as carbon dioxide, carbon monoxide, phenols various hydrocarbons, hydrogen cyanide, and oxides of nitrogen may be released in a fire.

Section 11- Toxicological Information

Toxicity Data:

This product has not been tested. No data available.

Section 12 - Ecological Information

Ecotoxicity: No data available
Environmental Fate: No data available
Environmental Degradation: No data available
Soil Absorption/Mobility: No data available

Section 13 - Disposal Considerations

Waste Management Information:
Dispose by liquid incineration in accordance with applicable state, federal and local regulations.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Consumer Commodity, ORM-D
Shipping Symbols: D
Hazard Class: ORM-D
ID No.: none
Packing Group: none
Label: none
Special Provisions (172.102): none

Packaging Authorizations
a) Exceptions: 173.156, 173.306
b) Non-bulk Packaging: 173.156, 173.306
c) Bulk Packaging: none

Quantity Limitations
a) Passenger, Aircraft, or Railcar: 30 kg gross
b) Cargo Aircraft Only: 30 kg gross

Vessel Stowage Requirements
a) Vessel Stowage: A
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)

Component	RQ (lbs)
Toluene	1000
Xylenes (O-, M-, P- Isomers)	100
Methyl Isobutyl Ketone	5000
Cyclohexanone	5000
Methyl Alcohol	5000
Ethylbenzene	1000

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):

Section 313 Component(s)	CAS Number	%
Toluene	105-88-3	10 – 30
Methanol	67-56-1	1 - 5
Xylene	1330-20-7	5 - 10
Methyl Isobutyl Ketone	108-10-1	3 - 7
Dioctyl Adipate	103-23-1	1 - 5
Aluminum	429-90-5	1 – 5
Ethylbenzene	100-41-4	7 - 13

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 (29CFR 1910): None listed

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

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 cancer:

1.3-Butadiene
Acrylonitrile
Formaldehyde (Gas)
Benzene
Quartz

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
Benzene

Delaware Air Quality Management List:

Chemical Name	DRQ:	State?
Toluene	1000	N
Xylene	100	N
Cyclohexanone	5000	N
Methyl Alcohol	5000	N
Methyl isobutyl ketone	5000	N
Aluminum	100	Y

Massachusetts Hazardous Substances List:

Chemical Name	CAS #	Codes
Toluene	108-88-3	2, 4, 5, 6, F7, F8
Xylene	1330-20-7	2, 4, F8, F9
Cyclohexanone	108-94-1	2, 4, 6, F8
Methyl Alcohol	67-56-1	2, 4, 5, 6, F8, F9
Methyl isobutyl ketone	108-10-1	2, 4, 5, 6, F8, F9
Aliphatic Hydrocarbons	8052-41-3	2, 4
Quartz	14808-60-7	1, 2, 4, ***E* C***, F5
Aluminum	7429-90-5	4, 5, F1, F9
Dioctyl adipate	103-23-1	F9

Michigan Critical Materials Registry:

Chemical Name	CAS #	Report	Class
Toluene	108-88-3	- -	- -
Xylene	1330-20-7	- -	- -

Minnesota Hazardous Substance:

Chemical Name	Codes	Hazards	Carcinogen?
Toluene	ANO	skin	No
Xylene	ANO	- -	No
Cyclohexanone	ANO	skin	No
Methyl Alcohol	ANO	- -	No
Methyl isobutyl ketone	ANO	- -	No
Aliphatic Hydrocarbons	ANO	- -	No
Quartz	A	- -	No
Aluminum	A	- -	No

New Jersey RTK Label Information:

Chemical Name	CAS #	Substance #	DOT #	TPQ	EHS
Toluene	108-88-3	1866	1294	- -	
Stoddard Solvent	8052-41-3				
Xylenes	1330-20-7	2014	1307	- -	
Methyl Isobutyl Ketone	108-10-1	1268	1245	- -	
Aluminum	7429-90-5	0054	- -	- -	
Silica, Mica	12001-26-2				
Bis (2-Ethylhexyl) Adipate	103-23-1				
Cyclohexanone	108-94-1				
Methyl Alcohol	67-56-1	1222	1230	- -	
Ethyl Benzene	100-41-4				

New York List of Hazardous Substances:

Chemical Name	RQ – Air	RQ – Land	Note
Toluene	1000	1	none
Xylene	1000	1	none
Cyclohexanone	5000	1	none
Methyl Alcohol	5000	1	none
Methyl isobutyl ketone	5000	1	none

Pennsylvania RTK Label Information

Chemical Name	CAS #	Code	
Benzene, Methyl	108-88-3	E	
Stoddard Solvent	8052-41-3	- -	
Benzene, Dimethyl	1330-20-7	E	
2-Pentanone, 4-Methyl-	108-10-1	E	Code E = Environmental Hazard
Aluminum	7429-90-5	E	Code - - = Basic Hazard
Mica Group Mineral	12001-26-2	- -	
Bis (2-Ethylhexyl) Adipate	103-23-1	E	

Cyclohexanone	108-94-1	E
Methanol	67-56-1	E
Benzene, Ethyl-	100-41-4	E
Quartz	14808-60-7	- -

Washington Air Contaminant:

TWA (ppm):	100 (Toluene)
TWA (mg):	375 (Toluene)
STEL (ppm):	150 (Toluene)
STEL (mg):	560 (Toluene)
Ceiling (ppm):	None listed
Ceiling (mg):	None listed
Skin:	None listed

Section 16 - Other Information

Prepared By: Research & Development
Revision Notes: General Review - Formatting Changes.

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