MATERIAL SAFETY DATA SHEET

SECTION 1 ◆ CHEMICAL PRODUCTS AND COMPANY IDENTIFICATION

Schrader-Bridgeport International, Inc. 500 South 45th Street E. Muskogee, Oklahoma 74403 (918) 687 - 5427	**FOR EMERGENCY SOURCE INFORMATION CONTACT:** • (918) 687 - 5427 • CHEMTREC: (800) 424-9300 (24 hour contact) • CANUTEC: (613) 996-6666 • SETIQ: 91-800-00214
TRADE NAMES/SYNONYMS: Rubber Adhesive **OTHER PRODUCT IDENTIFICATIONS ATTACHED**	**CHEMICAL FAMILY:** Halogenated Solvent (Blend CAMSOLVE 532)

SECTION 2 ▼ COMPOSITION/INFORMATION OF INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENTAGE (%)
Trichloroethylene	79-01-6	42.5 - 45.0
Methylene Chloride	75-09-2	25.5 - 27.0
Xylene (Mixed Isomers)	1330-20-7	13.6 - 14.4
Ethyl Benzene	100-41-4	3.4 - 3.6
Toluene	108-88-3	<1.0
1,2 Butylene Oxide	106-88-7	Trace
Stabilizers	Not Applicable (N.A.)	Trace
Nonhazardous Ingredients	N.A.	10.0-15.0

SECTION 3 ✷ HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- Colorless liquid with an irritating odor at high concentrations
- May cause skin and eye irritation
- Inhalation and ingestion can cause central nervous system effects such as dizziness, headache, nausea, drowsiness, unconsciousness and possible death
- Irritating and poisonous gases are produced if involved in fire
- Target Organs: Central nervous system, kidneys, heart and liver

ACUTE

GETTING IT IN YOUR EYE...

- May cause eye irritation with tearing and burning pain

GETTING IT ON YOUR SKIN...

- Prolonged and/or repeated contact may cause defatting of the skin, dermatitis and burning/blistering
- May be absorbed through the skin, however not likely a significant route of entry

SWALLOWING IT...

- May cause gastrointestinal irritation with nausea, vomiting and diarrhea
- May cause central nervous system depression characterized by excitement, headache, dizziness and drowsiness.

BREATHING IT...

- Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unconsciousness and coma
- May cause respiratory tract irritation

- Aspiration of trichloroethylene into the lungs may cause chemical pneumonitis, which is fatal

SYSTEMIC EFFECTS:

- Possible peripheral nervous system effects and mild liver dysfunction may occur, kidney damage may also occur
- Alcohol consumed before and after exposure may increase adverse effects
- Methylene Chloride is metabolized to carbon monoxide. Overexposure may cause an increase in carboxyhemoglobin level in blood. Persons with a compromised cardiovascular system may not be able to tolerate the added cardiovascular stress

CHRONIC

- Signs and symptoms of the ingredients are associated with central nervous system depression such as headache, dizziness, weakness, double vision, memory loss, decreased appetite, fatigue and impaired judgment
- May cause alcohol intolerance shown by temporary reddening of the skin
- May cause liver and kidney damage
- Prolonged or repeated skin exposure may cause dermatitis
- Exposures can cause the heart to beat irregularly or stop
- For Xylene and Toluene, repeated exposure can damage bone marrow, causing low blood cell count.

CANCER, REPRODUCTIVE AND GENETIC EFFECTS

- Possible cancer hazard based on test with laboratory animals have been reported for Trichloroethylene and Methylene Chloride (lung, liver and pancreas)
- There is limited evidence suggesting that Xylene, Ethyl Benzene and Trichloroethylene may damage the fetus
- 1,2 Butylene Oxide may decrease fertility in females and cause genetic mutations.

See Toxicological Information (Section 11) For More Information

SECTION 4 ✣ FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids, Get Medical Aid

SKIN: Quickly remove contaminated clothing and immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

INGESTION: Do not induce vomiting. Call a physician and/or transport to an emergency facility immediately.

INHALATION: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

NOTE TO PHYSICIAN: TREAT SYMPTOMATICALLY AND SUPPORTIVELY

SECTION 5 ⌘ FIRE FIGHTING MEASURES

- Poisonous and irritant gases are produced in fire including Phosgene and Hydrogen Chloride
- Will burn if involved in a fire
- May form flammable mixtures in air and containers may explode in a fire
- Extinguish all sources of ignition, vapors can travel to a source of ignition and flash back
- If employees are expected to fight fires, they must be trained and equipped as stated in OSHA29CFR 1910.156
- Avoid accumulation of water since this product may float on water and re-ignite

FLASH POINT:(Method Used) >140°F (TCC) (>60 °C)	**FLAMMABLE LIMITS:** LEL: 1.0% @ 212 °F UEL: 44.8% @ 212 °F
IGNITION SEVERITY: N.A.	**EXPLOSION SEVERITY:** N.A.
MINIMUM EXPLOSION CONCENTRATION: N.A.	**AUTOIGNITION TEMPERATURE:** Not Established

EXTINGUISHING MEDIA: Water fog, dry chemical, foam, or Carbon Dioxide (CO_2). Do not use a direct water stream. Use water spray to cool nearby containers and structure exposed to fire.

SPECIAL INSTRUCTIONS: Approach fire from upwind. As in any fire, wear self contained breathing apparatus pressure demand (NIOSH/MSHA approved) and full protective gear.

SECTION 6 ❖ ACCIDENTAL RELEASE MEASURES

- Evacuate as necessary
- Remove all sources of ignition and use spark proof tools
- Ventilate the area of spill or leak
- Do not touch or walk through the spilled material
- Stop leak if you can do it without risk
- Wear appropriate protective equipment as specified in Section 8
- Absorb spill using an absorbent, noncombustible materials such as earth, sand or vermiculite
- Prevent entry into waterways, sewers, basements or confined areas
- It may be necessary to contain and dispose of this material as a hazardous waste. Contact your state or province environmental program for specific information.
- For large spills and fires immediately call the Fire Department

SECTION 7 ⚹ HANDLING AND STORAGE

Prior to working with this product workers should be trained on its proper handling and storage

- Wash thoroughly after handling
- Remove contaminated clothing and wash before reuse
- Use with adequate ventilation
- Avoid contact with eyes, skin and clothing
- Empty container contain product residue, and can be dangerous
- The product should be handled an stored away from operations which generate high temperatures, such as arc welding or cutting; unshielded resistance heating; open flames and high intensive ultraviolet. Do not pressurize.
- Store in tightly closed container and separate from active metals
- Keep from contact with oxidizing materials
- Store in a cool, dry, well ventilated area away from incompatible substances and store away from light

SECTION 8 ⌗ EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within there exposure limits (see below) during the use of this product

EXPOSURE LIMITS

PEL		TLV (2002)		REL		CANADA	
TRICHLOROETHYLENE							
TWA	CEILING	TWA	STEL	TWA	STEL	TWA	CEILING
100 ppm	200 ppm 300 ppm - for 5 minutes in any 2 hours	50 ppm	100 PPM	25 ppm	N.A.	50 ppm	200 ppm
METHYLENE CHLORIDE							
TWA	STEL	TWA	STEL	TWA	STEL	TWA	CEILING
25 ppm	125 ppm	50 ppm	N.A.	Lowest feasible concentration	N.A.	50 ppm	200 ppm
XYLENE							
TWA	STEL	TWA	STEL	TWA	STEL	TWA	CEILING
100 ppm	150 ppm	100 ppm	150 ppm	100 ppm	150 ppm	100 ppm	150 ppm

ETHYL BENZENE							
TWA	STEL	TWA	STEL	TWA	STEL	TWA	CEILING
100 ppm	125 ppm	100 ppm	125 ppm	100 ppm	125 ppm	100 ppm	125 ppm

TOLUENE							
TWA	CEILING	TWA	STEL	TWA	STEL	TWA	CEILING
200 ppm	300 ppm 500 ppm- for 10 minutes	50 ppm	N.A.	100 ppm	150 ppm	100 ppm	150 ppm

PERSONAL PROTECTIVE EQUIPMENT

- **EYES:** Wear safety glasses or chemical goggles when handling this product (ANSI Z87.1 approved)
- **SKIN:** Where contact is likely wear chemical resistant gloves
- **RESPIRATORY PROTECTION:** A NIOSH approved air purifying respirator (APR) with properly selected cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by APRs is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where APRs may not provide adequate protection.

SECTION 9 ϟ PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (760 MM HG)**:**104-289 °F(40-143°C)	**PERCENT VOLATILE BY VOLUME:** >85%
SPECIFIC GRAVITY (H_2O = 1): 1.3 (77 °F)	**MELTING POINT:** N.A.
EVAPORATION RATE (BuAc = 1): Unavailable	**VAPOR DENSITY (AIR =1):** >1
VAPOR PRESSURE AT 68 °F: 25-355 mm Hg	**SOLUBILITY IN WATER:** Slight at 77 °F (25 °C)
APPEARANCE AND ODOR: Colorless liquid with a irritating odor at high concentrations	

SECTION 10 ¤ STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal temperatures and pressures

CONDITIONS TO AVOID: Avoid open Flames, welding arcs or other high temperatures. Hydrolysis producing small amounts of hydrochloric acid possible with gross water contamination.

MATERIAL TO AVOID:

- Strong bases such as caustic soda, caustic potash.
- Chemical active metals such as aluminum, beryllium, lithium,. Magnesium
- Avoid contact with amines and oxidizer

HAZARDOUS POLYMERIZATION: Has not been reported

SECTION 11 ֍ TOXICOLOGICAL INFORMATION

TRICHLOROETHYLENE

Experimental poison by intravenous and subcutaneous routes. Moderately toxic experimentally by ingestion and intraperitoneal routes. Mildly toxic to humans by ingestion and inhalation. Mildly toxic experimentally by inhalation. An experimental carcinogen, tumorigen and teratogen. Human systemic effects by ingestion and inhalation, including irregular heart beats. Target organs include kidneys, liver and central nervous system. Experimental reproductive effects. Human mutagenic data. An eye and severe skin irritant. A form of addiction has been observed in exposed workers.

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
$LD_{50(oral)}$	Mouse	2402 mg/kg	$LC_{Lo(inh)}$	Human	2900 ppm	$TD_{LO(oral)}$	Human	812 mg/kg

SKIN IRRITATION: rabbit 2 mg/24 hour SEV **EYE IRRITATION:** rabbit 20 mg/24 Hour MOD

CARCINOGENICITY

IARC	Limited evidence in animals	Inadequate evidence in humans	Group 3: not classifiable as a human carcinogen
NTP (gavage)	Suspect Carcinogen	Inadequate Study: male and	Positive: male and female mouse

				female rat				
California (Prop 65): Listed as carcinogen		**NIOSH:** Occupational Carcinogen		**ACGIH:** A5 - Not suspected as human carcinogen		**OSHA:** Possible Select Carcinogen		

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

IARC and NTP states that variability in the mutagenicity test results may be due to the presence of various stabilizer used which may be present (epoxybutane, epichlorohydrin). 1988 EPA Genotoxic Program - Positive for S cerevisiae-reversion, Cell transformation RLV F344 rat embryo and mouse spot test(sperm morphology)

METHYLENE CHLORIDE

Poison by intravenous route. Moderately toxic by ingestion, subcutaneous and intraperitoneal routes. Mildly toxic by inhalation. An experimental carcinogen and tumorigen. An experimental teratogen. Experimental reproductive effects. An eye and severe skin irritant. Human mutagenic data.

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
$LD_{50(oral)}$	Mouse	1600 mg/kg	$LC_{50(inh)}$	Mouse	14400 ppm	$LD_{LO(oral)}$	Human	357 mg/kg

SKIN IRRITATION: rabbit 810 mg/24 hour SEV **EYE IRRITATION:** rabbit 500 mg/24 Hour MOD

CARCINOGENICITY

IARC	Sufficient evidence in animals	Inadequate evidence in humans	Group 2B: Possible human carcinogen
NTP	Anticipated Human Carcinogen	Clear Evidence - female rat	Some Evidence - male rat

California (Prop 65): Listed as carcinogen	**NIOSH:** Occupational Carcinogen	**ACGIH:** A2 - Suspect human carcinogen	**OSHA:** Possible Select Carcinogen

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

Although results of Ames bacterial test have generally been positive, overall the data suggest that genotoxic potential does not appear to be significant factor. 1988 EPA Genotoxic Program - Positive for S cerevisiae-reversion and Cell transformation RLV F344 rat embryo

XYLENE

Moderate via inhalation and oral routes

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
$LD_{50(oral)}$	Mouse	4300 mg/kg	$LC_{50(inh)}$	Rat	5000 ppm	$LD_{LO\ (oral)}$	Human	50 mg/kg

SKIN IRRITATION: rabbit 500 mg/24 hour MOD **EYE IRRITATION:** rabbit 5 mg/24 Hour MOD

CARCINOGENICITY

IARC	Inadequate evidence in animals	Inadequate evidence in humans	Group 3: not classifiable as a human carcinogen
NTP (gavage)	Suspect Carcinogen	No Evidence-male and female rat	No Evidence-male / female mouse

California (Prop 65): Listed as carcinogen	**NIOSH:** Occupational Carcinogen	**ACGIH:** A4-Not Classifiable As Human Carcinogen	**OSHA:** Possible Select Carcinogen

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

No information available.

ETHYL BENZENE

Moderate via irritation to the skin, eyes and mucous membranes, and via oral and inhalation routes. A concentration of 0.19% vapor in air will irritate eyes; 0.2% is extremely irritating. An experimental teratogen.

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
$LD_{50(oral)}$	Rat	3500 mg/kg	$LC_{Lo(inh)}$	Rat	4000 ppm	$TC_{LO\ (inh)}$	Human	100 ppm

SKIN IRRITATION: rabbit 15 mg/24 hour MLD **EYE IRRITATION:** rabbit 100 mg

CARCINOGENICITY

IARC	**NTP**	**California**(Prop 65)	**NIOSH**	**ACGIH**	**OSHA**
Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

No information available.

TOLUENE

Poison by intraperitoneal route. Moderately toxic by intravenous, subcutaneous and possibly other routes. Mildly toxic by inhalation. An experimental teratogen. Human systemic effects by inhalation. Experimental reproductive effects. Mutagenic data. A human eye irritant. An experimental skin and severe eye irritant. In the few cases of acute poisoning reported, the effect has been that of a narcotic, the workman passing through a stage of intoxication into one of coma. Recovery following removal from exposure has been the rule.

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
$LD_{50(oral)}$	Rat	5000 mg/kg	$LC_{50(inh)}$	Mouse	5320 ppm	$LD_{LO\ (oral)}$	Human	50 mg/kg

SKIN IRRITATION: rabbit 20 mg/24 hour MOD **EYE IRRITATION:** rabbit 2 mg/24 Hour SEV

CARCINOGENICITY

IARC	Inadequate evidence in animals	Inadequate evidence in humans	Group 3: not classifiable as a human carcinogen
NTP (gavage)	Suspect Carcinogen	No Evidence-male and female rat	No Evidence-male / female mouse

California (Prop 65): Listed as carcinogen	**NIOSH:** Occupational Carcinogen	**ACGIH:**A4-Not Classifiable As Human Carcinogen	**OSHA:** Possible Select Carcinogen

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

Specific developmental abnormalities included craniofacial effects involving the nose and tongue, musculoskeletal effects, urogenital and metabolic effects in studies on mice and rats by the inhalation and oral routes of exposure. Some evidence of fetotoxicity with reduced fetal weight and retarded skeletal development has been reported in mice and rats.

Effects on fertility such as abortion were reported in rabbits by inhalation. Paternal effects were noted in rats by inhalation. These effects involved the testes, sperm duct and epididymis.

SECTION 12 ❋ ECOLOGICAL INFORMATION

ACUTE EFFECTS: Ingredients range from moderate (Trichloroethylene, Methylene Chloride) to high (Xylene) toxicity to aquatic life. Insufficient data are available to evaluate or predict the short-term effects to birds or land animals.

CHRONIC EFFECTS: Ingredients range from moderate (Trichloroethylene, Methylene Chloride) to high (Xylene) toxicity to aquatic life. Insufficient data are available to evaluate or predict the long-term effects to birds or land animals.

DISTRIBUTION AND PERSISTENCE IN THE ENVIRONMENT: Trichloroethylene is non-persistent in water, with a half-life of less than 2 days. About 99.6% of Trichloroethylene will eventually end up in air; the rest will end up in the water. Methylene Chloride is slightly persistent in water, with a half- life of between 2 to 200 days. About 99% of Methylene Chloride will eventually end up in air; the rest will end up in the water. Xylene is non-persistent in water, with a half-life of less than 2 days. About 99.3% of Xylene will eventually end up in water; about 0.5% will end up in water; about 0.1%, respectively will end up in terrestrial soils and in aquatic sediments.

BIOACCUMULATION IN AQUATIC ORGANISMS: The concentration of Trichloroethylene and Xylene found in fish tissues is expected to be somewhat higher than the average concentration in the water from which the fish was taken. The concentration of Methylene Chloride found in fish tissues is expected to be about the same as the average concentration of Methylene Chloride in the water from which the fish was taken.

SECTION 13 ✣ DISPOSAL CONSIDERATIONS

When disposing of the unused contents, the preferred options are to send to licensed reclaimer, or to a permitted incinerator. Any disposal practice must be in compliance with local, state, and federal laws and regulations. Do not dump into sewer, on the ground or into any body of water

SECTION 14 ★ TRANSPORTATION INFORMATION

Not Meant To Be All Inclusive - Check Local, State, And Federal Laws And Regulations

Agency	Shipping Name	Packing Group	Hazard Class	UN/NA #
U.S. DOT Canadian TDG	Toxic Liquid,Organic n.o.s. (contains Trichloroethylene and Methylene Chloride)	III (ORM-D)	6.1	UN 2810

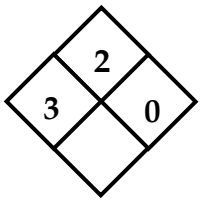
SECTION 15 ☽ REGULATORY INFORMATION

TSCA: All ingredients are listed on the TSCA inventory. None of the ingredients are listed under Chemical Test Rules, Section 12B, or Significant New Use Rules

CERCLA RQ's	Trichloroethylene - 100 pounds	Methylene Chloride - 1,000 pounds
(40 CFR Part 302)	Xylene - 1,000 pounds	Ethyl Benzene - 1,000 pounds
	Toluene - 1,000 pounds	1, 2 Butylene Oxide - 1+ pounds
RCRA	Trichloroethylene - U228	Methylene Chloride - U080
	Xylene - U239	Toluene - U220
SARA (40 CFR Part 355) TPQ's	None of the ingredients are listed	
SARA Title III Section 313	All ingredients listed	
Clean Air Act - Hazardous Air Pollutants	All ingredients listed	
Clean Air Act - Ozone Depleting List	None of the ingredients are listed as Class 1 or 2 ozone depletors	
California's Prop 65	All ingredients listed	
OSHA	All ingredients are listed as hazardous under 29 CFR 1910.1200	
Canada's DSL/NDSL List	All ingredients listed	
Canada's Ingredient Disclosure List	All ingredients listed	

SECTION 16 ❁ OTHER INFORMATION

NFPA 704 LABEL:



HMIS LABEL

3-2-0-G

MSDS REVISIONS: #2-Section 5, 14, #3 Section 8

MSDS CREATION DATE: 5/16/95 **REVISION #4: 3/9/03**

DISCLAIMER

The information above is believed to be accurate and represents the best information currently available to the Manufacturer and MSDS developer. However, we make no warranty of merchantability or any other warrant, express or implied, with respect to such information, and we assume no liability resulting from its use. User should make their own investigation to determine the suitability of the information for their particular purposes. In no way shall the Manufacturer or MSDS developer be liable for any claims, losses, or damage of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the Manufacturer or MSDS developer has been advised of the possibility of such damages.

MSDS DEVELOPER: Cass Willard

Cass Willard, CIH

DATE: 03/09/03