SECTION 1 – IDENTIFICATION

Chemical Name: Metal Prep II **Product No.:** CH020
Classification: Solvent Cleaner and Degreaser
Suppliers Name: Metalink Polymer and Adhesives **Emergency Phone:** 1-800-721-2448
Address: P.O. Box 209, Buna, TX 77612

SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component	CAS NO.	Concentration
Trichloroethylene	79-01-6	<=100%

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Appearance: liquid
CAUTION! May affect the central nervous system causing dizziness, headache or nausea. May cause eye irritation. May cause skin and respiratory tract irritation. Prolonged or repeated contact may dry skin and cause dermatitis and burns. Contains chlorinated solvents. Can cause death if too much is inhaled.

Potential Health Effects

Exposure Routes: Inhalation, skin absorption, skin contact, eye contact and ingestion.

Eye Contact: Can cause eye irritation. Symptoms include stinging, tearing, redness and swelling of eyes.

Skin Contact: Can cause skin irritation. Symptoms may include redness and burning of skin and other skin damage. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning and drying and cracking of skin, skin burns and other damage.

Ingestion: Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

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. Symptoms are not expected at air concentrations below the recommended exposure limits. If applicable (see Section 8). Alcohol consumed before or after exposure may worsen harmful effects.

Aggravated Medical Condition: Pre-existing disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (e.g.: asthma-like conditions), liver, kidney, nervous system, spleen and auditory system. Exposure to this material may aggravate any pre-existing condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemia. Individuals with pre-existing heart disorders may be more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

Symptoms Signs and symptoms of exposure to this material through breathing, swallowing and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting and diarrhea), irritation (nose, throat and airways), cough and central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache and unconsciousness), lack of coordination or irregular heartbeat.

Target Organs Persons exposed to trichloroethylene may become intolerant to alcohol with small quantities causing drunkenness and skin blotches. Studies on trichloroethylene-exposed workers indicate that overexposure to this chemical may result in involuntary eye movement, tremors, sleep disturbances, symptoms of central nervous system (CNS) depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other CNS Effects. Brief or prolonged exposure to trichloroethylene and its decomposition products (e.g. dichloroacetylene) has been associated with cranial neuropathy (characterized by facial numbness); although it is not clear which agent is responsible for the effect. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: liver abnormalities, effects on hearing, spleen damage, nervous system damage, kidneys damage, lung damage and brain damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: liver abnormalities, anemia and lung damage.

Carcinogenicity Exposure to trichloroethylene has been associated with slight increases in certain types of cancer, including liver, biliary tract and non-Hodgkin's' lymphoma in some studies. However, other studies have not found an increased cancer incidence in groups exposed to trichloroethylene. Some studies with trichloroethylene in laboratory animals have produced cancer of the liver and/or lung, while others have not. Trichloroethylene is considered to be a probable human carcinogen by the International Agency for Research on Cancer (IARC) and is listed as a carcinogen by the National Toxicology Program (NTP).

Reproductive Hazard This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

SECTION 4 – FIRST AID MEASURES

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

Ingestion: Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on left side with the head down. Contact a physician, medical facility or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation: If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to Physician

Hazards: 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 material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3 – Ingestion) when deciding whether to induce vomiting.

Treatment: No information available.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, carbon dioxide (CO2) or water spray. **Hazardous combustion products:** Carbon dioxide and carbon monoxide, chlorine, hydrogen chloride, phosgene and hydrocarbons. **Precautions for fire fighting:** No flash to boiling point. This produce contains halogenated solvents which inhibit flashing until the halogenated solvent has been evaporated away. The product may become combustible or flammable after this occurs. Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Wear full firefighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions: For personal protection see Section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. **Environmental precautions:** Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system. **Methods for cleaning up:** Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder or sawdust). **Other information:** Comply with all applicable federal, state, and local regulations.

SECTION 7 – HANDLING AND STORAGE

Handling: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid and/or solid), all hazard precautions given in the data sheet must be observed. **Storage:** Store in a cool, dry ventilated area.

SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION

ACGIH	Time weighted average	10 ppm
ACGIH	Short term exposure limit	25 ppm
NIOSH	Recommended exposure limit (REL)	25 ppm

OSHA Z2	Time weighted average	100 ppm
OSHA Z2	Ceiling Limit Value	200 ppm
OSHA Z2	Maximum concentration	300 ppm

General Advice: These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye Protection: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid vapor or mist.

Skin and Body Protection: Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use. Wear resistant gloves (consult your safety equipment supplier). Discard gloves that show tears, pinholes or signs of wear.

Respiratory Protection: A NIOSH approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	**Density**	1.462 g/cm3 @ 77.0ºF / 25.0ºC
Form	Liquid		12.11 lb/gal @ 77.00ºF / 25.00ºC
Color	No data available	**Bulk density**	1.62 kg/m3
Odor	No data available	**Water solubility**	Slightly soluble
Boiling point/boiling range	189.0ºF / 87.2ºC	**Solubility(ies)**	No data available
Melting point	-120.5ºF / -84.7ºC	**Partition coefficient:**	
Sublimation point	No data available	**n-octanol/water**	No data available
pH	No data available	**Log Pow**	2.61
Flash point	Not applicable	**Auto ignition temperature**	788ºF / 420ºC
Ignition temperature	No data available	**Viscosity, dynamic**	0.6 mPa.s
Evaporation rate	3.1 Ethyl Ether	**Viscosity, kinematic**	No data available
Lower explosion limit/		**Solids in solution**	No data available
Upper explosion limit	8%(V) / 10.5%(V)	**Decomposition temperature**	No data available
Particle size	No data available	**Burning number**	No data available
Vapor pressure	9.199 kPa @ 77ºF 25ºC	**Dust explosion constant**	No data available
Relative density	4.53 AIR = 1	**Minimum Ignition energy**	No data available

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable. **Conditions to avoid:** None known. **Incompatible products:** Reactive metals such as aluminum and magnesium, strong alkalis, strong oxidizing agents. **Hazardous decomposition products:** Carbon dioxide and carbon monoxide, chlorine, hydrogen chloride, phosgene and hydrocarbons. Avoid contact with open flame, welding arcs, resistance heaters, etc., which can result in thermal decomposition releasing hydrogen chloride and small amounts of phosgene and chlorine. **Hazardous reactions:** Product will not undergo hazardous polymerization. **Thermal decomposition:** No data.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute oral toxicity:	LD 50 Rat: 4,920 mg/kg
Acute inhalation toxicity:	LD 50 Rat: 12m999 mg/l; 4h
Acute dermal toxicity:	LD 50 Rabbit: (>) 20 g/kg

SECTION 12 – ECOLOGICAL INFORMATION

Biodegradability Trichloroethylene:	No data available	
Bioaccumulation Trichloroethylene:	Species: Exposure time: Dose: Bioconcentration factor (BCF): Method:	Bluegill (Lepomis macrochirus) 14 d 0.00823 mg/l 17 Flow through
Ecotoxicity Effects		
Toxicity to fish Trichloroethylene	48 h flow-through test LC 50 Danio rerio (zebra fish):	60.00 mg/l; Mortality
Toxicity to daphnia and other aquatic invertebrates: Trichloroethylene	48 h LC 50 Water flea (Daphnia magna):	12.00 – 26.00 mg/l Method: State Mortality
Toxicity to algae Trichloroethylene	No data available	
Toxicity to bacteria Trichloroethylene	No data available	
Biochemical Oxygen Demand (BOD) Trichloroethylene	No data available	
Chemical Oxygen Demand (COD) Trichloroethylene	No data available	
Additional ecological information Trichloroethylene	No data available	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste disposal methods: Do not dump into any sewers, on the ground, or into any body of water. Dispose of all waste and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations. Process water in contact with solvent and/or water separators of cleaning or distillation equipment should be treated as hazardous waste. Do not discharge water from water separators to drain.

SECTION 14 – TRANSPORT INFORMATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY
U.S. DOT - ROAD					
UN 1710	Trichloroethylene	6.1		III	
U.S. DOT - RAIL					
UN 1710	Trichloroethylene	6.1		III	
U.S. DOT – INLAND WATERWAYS					
UN 1710	Trichloroethylene	6.1		III	
TRANSPORT CANADA – ROAD					
UN 1710	Trichloroethylene	6.1		III	
TRANSPORT CANADA – RAIL					
UN 1710	Trichloroethylene	6.1		III	
TRANSPORT CANADA – INLAND WATERWAYS					
UN 1710	Trichloroethylene	6.1		III	
INTERNATIONAL MARITIME DANGEROUS GOODS					
UN 1710	Trichloroethylene	6.1		III	
INTERNATIONAL AIR TRANSPORT ASSOCIATION – CARGO					
UN 1710	Trichloroethylene	6.1		III	
INTERNATIONAL AIR TRANSPORT ASSOCIATION – PASSENGER					
UN 1710	Trichloroethylene	6.1		III	
MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES					
UN 1710	Trichloroetileno	6.1		III	

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15 – REGULATORY INFORMATION

California Prop. 65		
WARNING! This produce contains a chemical known to the State of California to cause cancer.	Trichloroethylene	
SARA 313 Component(s)		
Trichloroethylene	100.00%	
New Jersey RTK Label Information		
Trichloroethylene	79-01-6	
Pennsylvania RTK Label Information		
Trichloroethylene	79-01-6	
Notification Status		
Australia. Industrial Chemical Act (Notification and Assessment)	y (positive listing)	
Canada. Canadian Environmental Protection Act (CEPA), Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)	
China. Inventory of Existing Chemical Substances	y (positive listing)	
Japan. Kashin-Hou Law List	y (positive listing)	
U.S. Toxic Substances Control Act	y (positive listing)	
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)	
Japan. Industrial Safety & Health Law (ISHL) List	y (positive listing)	
New Zealand. Inventory of Chemical (NZIoC), as published by ERMA New Zealand	y (positive listing)	
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)	
Reportable Quantity – Product		
U.S. EPA CERCLA Hazardous Substances (40 CFR 302)		100 lbs.
Reportable Quantity - Components		
Trichloroethylene	79-01-6	100 lbs.

	HMIS	NFPA
Health	2*	2
Flammability	0	0
Physical Hazards	0	
Instability		0
Specific Hazard	--	--

SECTION 16 – OTHER INFORMATION

The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the user. No suggestions for use are intended as, and nothing herein shall be construed as a recommendation to infringe any existing patents or violate any federal, state or local laws, rules, regulations or ordinances.