Safety Data Sheet

Better Chemistry. **Better Business**

HUB-TRI **Revised:** 5/21/18

1 IDENTIFICATION

Product Name: HUB-TRI

Product Code :4351002

Other Means of identification: Trichloroethylene

Recommended use of the chemical and restrictions on use: Solvent

Hubbard-Hall Inc.
563 South Leonard Street
Waterbury, CT 06708
Telephone: 203-756-5521
Fax number: 203-756-9017

Emergency Phone Number
CHEMTREC: 1 (800) 424-9300
International: 1 (703) 527-3887

2 HAZARDS IDENTIFICATION


Signal Word: WARNING

Hazard Category: Acute Toxicity-Oral Hazard Category 4
Specific Target Organ Toxicity (Single Exposure) Hazard Category 3
Specific Target Organ Toxicity (Single Exposure) Hazard Category 2
Skin Corrosion/Irritation Hazard Category 2
Eye Damage/Irritation Hazard Category 2A
Carcinogenicity Hazard Category 1B
Toxic to Reproduction Hazard Category 2

Hazard Statements: Harmful if swallowed.
May cause respiratory irritation.
May cause damage to liver and kidneys
Causes serious eye irritation.
May cause cancer.
Suspected of damaging fertility or the unborn child.

Prevention: Do not eat, drink or smoke when using this product.
Wash skin thoroughly after handling.
Use only outdoors or in well ventilated area.
Do not breathe dust, fumes, gas, mist, vapors or spray.
Wear rubber gloves, goggles and chemical protective clothing.

Obtain special instruction before use.

Do not handle until all safety precautions have been read and understood.

Response: If swallowed: Call poison center/doctor if you feel unwell.

Rinse Mouth.

If on skin: Wash with plenty of water.

If skin irritation or rash occurs, get medical advice/attention.

Take off immediately all contaminated clothing and wash it before reuse.

Specific treatment - refer to poison center or doctor for advice.

If exposed or concerned: Get medical advice/attention.

If in eyes: Wash cautiously with water for several minutes. Remove contact lenses if present and easy to do Continue rinsing. If eye irritation persists, get medical attention .

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local, regional, national, or international regulations.

3 COMPOSITION INFORMATION

Chemical Name	Common Name And Synonyms	CAS No. and other Unique identifiers	Concentration %
1,1,2-Trichloroethylene	Trichloroethene	79-01-6	99.4%
1,2-Butylene Oxide	-	106-88-7	0.5%

4 FIRST AID

After Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

After Skin Contact:

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

After Eye Contact:

If in eyes: Rinse cautiously for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If irritated, call doctor.

After Ingestion:

Call a physician or poison control center immediately. Do not induce vomiting. Immediately rinse mouth and drink plenty of water. If vomiting occurs, keep head low so that the stomach content doesn't get into the lungs. Never give anything by mouth to an unconscious person. Do not use mouth-to-mouth method if victim ingested the substance.

Most Important Symptoms/Effects

Inhalation:

May cause upper respiratory tract irritation and central nervous system depression with symptons such as confusion, lightheadedness, nausea, vomiting, headache, and fatigue. Causes formation of carbon monoxide in blood which may affect cardiovascular system and central nervous system. Continued exposure may cause unconsciousness and even death.

Eye:

Vapors may cause eye irritation. Contact may cause tearing, redness, a stinging or burning feeling, swelling, and blurred vision.

Skin:

May cause effects ranging from mild irritation to severe pain, and possibly burns, depending on the intensity of contact. Skin absorption may occur.

Ingestion:

May cause nausea or vomiting. If vomiting results in aspiration, chemical pneumonia could occur. Absorption through the gastrointestinal tract may produce central nervous system depression.

Chronic:
May cause liver damage. May cause cancer based on animal data.

5 FIRE FIGHTING MEASURES

Suitable and Unsuitable extinguishing media: In case of fire: Use water spray (fog), foam, dry chemicals, carbon dioxide, or other type of vapor producing extinguisher.

Specific hazards arising from the chemical: Heat and fire may result in the release of corrosive fumes.

Special protective equipment and precautions for firefighter Wear chemical resistant protective equipment and self contained breathing apparatus (SCBA).

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, & Emergency Proc Wear chemical goggle, gloves and face shield and protective clothing.

Prevent spilled product from drains, sewers, waterways and soil.

Methods and Materials for containment & cleaning up: If trained in accordance 29 CFR 1910.120, leaks should be stopped. Spills should be contained and cleaned immediately. Persons performing clean up work should wear adequate personal protective equipment and clothing. Spills and releases should be reported, if required, to the appropriate local, state and federal regulatory agencies.

7 HANDLING AND STORAGE

Precautions for safe handling: Avoid breathing dust, fumes, gas, mist, vapors and sprays.

Use ventilation sufficient to keep personal exposure below the OSHA Permissible Exposure Limits (PEL) and or the ACGIH Threshold Limit Value (TLV) Time Weighted Average (TWA) exposure limits.

Wear rubber gloves, goggles and chemical protective clothing.

Keep away from heat.

Minimize the release of this product to the environment.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Name	Std.	TWA-8hrs	STEL - 15 min.
1,1,2-Trichloroethylene	ACGIH	10 ppm	25 ppm
1,2-Butylene Oxide	AIHA WEEL	2 ppm	-

ACGIH - American Control of Governmental Hygenists
OSHA - Occupational Safety and Health Administration

Ventilation: Use local exhaust to keep personal exposures below the OSHA Permissible Exposure Limit(s) (PEL) or the ACGIH threshold Limit Values (TLV)Time Weight Average (TWA).

Respiratory Protection: A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI 788.2 or applicable federal requirements must be followed whenever work place conditions warrant respirator use. NIOSH's Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Other: Safety shower in work area.

Eye Protection: Wear safety glasses with side shields.

Other Protective Equipment:	Use gloves when contact with product may occur. Viton, laminate film, PVA, or Silvershield gloves offer the best protection.DO NOT use natural rubber gloves when handling this product. Nitrile, neoprene or butyl gloves offer less protection and should be used for splash protection only.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White mobile liquid.
Odor:	Sharp odor
Odor Threshold:	N/A
PH:	7-9 in 1% Water
Melting Point/Freezing Point:	-120.6 °F
Initial Boiling Point and Boiling Range:	188.1 °F
Flash Point:	N/A
Evaporation Rate:	N/A
Flammability (solid, gas):	Non flammable
Upper/Lower flammability or explosive limits:	8-44.8% V
Vapor Pressure:	74.26 mm Hg at 25 °C
Vapor Density:	4.5
Relative Density:	1.465
Solubility (ies):	N/A
Partition Coefficient; n-octanol/water:	N/A
Auto-ignition Temperature:	770 °F
Decomposition Temperature:	N/A
Viscosity:	N/A

10 STABILITY AND REACTIVITY

Chemical Stability:	Stable
Possibility of Hazardous Reactions:	Reacts with aluminum powder at 95 °C, reacts with amines releasing heat; forms explosive substances with alkali metals(Na,K,Li) & N2)O4,N2)5&H2NO5. Becomes flammable in air in the presence of >0.5% Methanol; corrodes some metals(Fe,CY, carbon steel) at elevated temperatures in the presence of moisture; attacks some plastics
Hazardous Decomposition Products:	Decomposes gradually in the presence of water to form Hydrochloric Acid. Forms phosgene, hydrogen chloride and chlorine in fires.

11 TOXICOLOGICAL INFORMATION

Oral Administration:	Trichloroethylene-LD50(Rat)-5400 mg/kg
Inhalation:	Trichloroethylene-LC50(Rat)>12,500 ppm 4 h
Dermal administration:	Trichloroethylene-LD50(rat)->2000 mg/kg
Irritation:	
Cancer Hazard:	1,1,2-Trichloroethylene-IARC Group 1 Carcinogenic to humans, NTP Anticipated carcinogen, ACGIH-Group 2A-Suspected Human carcinogen
Cancer Hazard:	1,2 Butylene Oxide IARC GRoup 2B-Possibly carcinogenic to humans
Reproductive Toxicity	Fetotoxic in rodents in presence of maternal toxicity; testicular atrophy in rats; may reduce sperm count in exposed men; dichloromethane found in breast milk of exposed women.

12 ECOLOGICAL INFORMATION

Daphnia Magna,	Trichloroethylene-EC50-20.8 mg/L-48 h

13 DISPOSAL CONSIDERATION

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

14 TRANSPORT INFORMATION

UN Number:	1710
UN Proper Shipping Name:	TRICHLOROETHYLENE,
Transport Hazard Class (es):	6.1
Packing Group:	III
ERG:	160

15 REGULATORY INFORMATION

HMIS: Health: 2 Flammability: 1 Reactivity: 0

Cercla	Trichloroethylene-RQ=100-lbs-
Sara Hazard Classification	Trichloroethylene-SARA 313 listed
Proposition 65	Trichloroethylene-Proposition 65 listed

16 OTHER INFORMATION