

HUB-PER DS

Revised: 8/5/21

1 IDENTIFICATION

Product Name: HUB-PER DS

Product Code :4351010

Other Means of identification:Tetrachloroethylene

Recommended use of the chemical and restrictions on use:NOT FOR SALE FOR USE IN DRY CLEANING OPERATIONS REGARDLESS OF NATIONAL,REGIONAL OR LOCAL REGULATIONS. Other restrictions based on local, regional, or national regulations may exist and must be determined on a case by case basis.

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2 HAZARDS IDENTIFICATION



Signal Word: DANGER

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

Hazard Statements: May cause drowsiness or dizziness.
May cause damage to nervous system and liver through prolonged or repeated exposure.
Causes eye irritation.
May cause cancer.
Causes skin irritation.
Toxic to aquatic life with long lasting effects
Suspected of damaging fertility or the unborn child.

Prevention: Avoid releases to the environment

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 inhaled: Remove person to fresh air and keep comfortable for breathing.

Get medical advice/attention if you feel unwell.
 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.
 If eye irritation persists: Get medical attention .
 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.

Store in well ventilated place. Keep container tightly closed.

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 %
Tetrachloroethylene	Perchloroethylene	127-18-4	<100%
n-Butyl glycidyl ether	-	2426-08-6	0.25-0.52%

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:

The initial effects of exposure to vapor are transient, slight eye irritation and possibly lightheadedness. Respiratory system effects: Central Nervous System (CNS) effects are characteristic following inhalation of chlorinated hydrocarbons and can range from lightheadedness at low exposure levels to loss of consciousness at high levels. CNS effects are an early warning that exposure to high levels has occurred there is risk of cardiac effects (palpitations, low blood pressure, arrhythmia, arrest), CNS effects include the following symptoms: abdominal pain, nausea, vomiting, headache, lightheadedness, blurry or double vision, personality changes, weakness, slurred speech, stupor, incoordination (disequilibrium, ataxia), coma and respiratory arrest. May irritate upper airways.

Eye:

Eye Irritation. Eye exposure may cause irritation, tearing, pain, conjunctivitis, clouding of cornea.

Skin:

Skin irritation. Skin exposure may cause irritation, rough red, dry skin, edema, blisters.

Ingestion:

Ingesting this material may cause gastrointestinal irritation, nausea, vomiting, headache, difficulty breathing, reduced blood pressure, weak and rapid pulse, Central Nervous System (CNS) depression, and Central Nervous System (CNS) symptoms such as sedation, headache, trempr, nystagmus and memory problems. Ingestion may cause unconsciousness and death.

Chronic:

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

Note to Physicians:

There is no antidote for perchloroethylene poisoning. Treatment consists of support of respiratory and cardiovascular functions. Catecholamine administration after exposure to this compound MAY pose enhanced risk of cardiac arrhythmia. For ingestion, nasogastric aspiration is recommended if volume of ingested is of sufficient volume to aspirate. Protect the airway. Epinephrine and other sympathomimetic amines may initiate cardiac arrhythmias in individuals exposed and experiencing symptoms from the material. Anti-arrhythmic agents may help prevent recurrent ventricular arrhythmias. Absorption from skin is low, and unless prevented from evaporating. The compound is rapidly absorbed by oral administration and causes similar effects to inhalation exposure. Activated charcoal may be administered. Liver injury may be delayed several days after exposure.

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.
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8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Name	Std.	TWA-8hrs	STEL - 15 min.
Tetrachloroethylene	ACGIH	25 ppm	100 ppm
n-Butyl glycidyl ether	ACGIH	3 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:	4-7
Melting Point/Freezing Point:	-2 °F
Initial Boiling Point and Boiling Range:	250.5 °F
Flash Point:	N/A
Evaporation Rate:	N/A
Flammability (solid, gas):	Non flammable
Upper/Lower flammability or explosive limits:	N/A
Vapor Pressure:	13 mm Hg at 20 °C
Vapor Density:	5.76
Relative Density:	1.619
Solubility (ies):	N/A
Partition Coefficient; n-octanol/water:	N/A
Auto-ignition Temperature:	N/A
Decomposition Temperature:	N/A
Viscosity:	N/A

10 STABILITY AND REACTIVITY

Chemical Stability:	Stable
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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) & N ₂ O ₄ ,N ₂ O ₅ &H ₂ NO ₅ . 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:	Tetrachloroethylene-LD50(Rat)->3000 mg/kg
Inhalation:	Tetrachloroethylene-LC50(Rat)>20 mg/L 4 h
Dermal administration:	Tetrachloroethylene-LD50(rabbit)->10,000 mg/kg
Irritation:	
Cancer Hazard:	Tetrachloroethylene-IARC Group 2A Probably Carcinogenic to humans, NTP Reasonably Anticipated carcinogen, ACGIH-Group A3-Confirmed animal carcinogen with unknown relevance to humans
Reproductive Toxicity	Some adverse reproductive effects, such as menstrual disorders, altered sperm structure, and reduced fertility, have been reported in studies of workers occupationally exposed to perchloroethylene. However, the evidence is inconclusive. Some studies of residents exposed to drinking water contaminated with perchloroethylene and other solvents during pregnancy suggest an association of perchloroethylene exposure with developmental or reproductive toxicant. In laboratory animal studies, effects of fetus and reproductive system have been seen only at doses that produced significant toxicity to the parent animal. An inhalation study involving the main stabilizer component, n-Butyl glycidyl ether (BGE), using male rats showed atrophy of the testes at levels 75 ppm and above. In addition, mouse studies with the same component showed decreased fertility in exposed male mice compared controls for both lower pregnancy rate and fetal viability to offspring. Therefore BGE is classified as a category 2 under GHS criteria as "suspected of damaging fertility or the unborn child". Since the stabilizer BGE is in the mixture at >0.3%, this product is classified as a category 2 reproductive toxin under GHS criteria for mixtures.
Reproductive Toxicity	

12 ECOLOGICAL INFORMATION

Fish, Oncorhynchus mykiss	Perchloroethylene-LC50-5 mg/L 96 h flow through test
Daphnia Magna,	Tetrachloroethylene-EC50-8.5 mg/L-48 h static test

13 DISPOSAL CONSIDERATION

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

14 TRANSPORT INFORMATION

UN Number:	1897
UN Proper Shipping Name:	TETRACHLOROETHYLENE,
Transport Hazard Class (es):	6.1, (9, MARINE POLLUTANT)
Packing Group:	III
ERG:	160

15 REGULATORY INFORMATION

HMIS: Health: 2 Flammability: 1 Reactivity: 0

Cercla Tetrachloroethylene-RQ=100-lbs-Marine Pollutant

Sara Hazard Classification Tetrachloroethylene-SARA 313 listed

Proposition 65 WARNING! This product contains a chemical or chemicals known to the state of California to cause cancer-Tetrachloroethylene

TSCA Inventory Status All components of this product are on the TSCA inventory or are exempt from TSCA inventory requirements .

16 OTHER INFORMATION

Disclaimer: The information is based on our knowledge to date but does not constitute an assurance of product properties and does not imply a legal contractual relationship.