

SAFETY DATA SHEET

SDS No.1021-21145

Revised Date February 23, 2015 1/4 page

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Trichloroethylene
NAME OF MANUFACTURER : GL Sciences Inc.
ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan
CHARGE SECTION : International Sales Section
TELEPHONE No. : +81-3-5323-6620
FACSIMILE No. : +81-3-5323-6621
PRODUCT No. : 1021-21145
SDS No. : 1021-21145
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Acute toxicity - inhalation - : Category 4
Skin corrosion/irritation : Category 2
Eye damage/irritation : Category 2A
Germ cell mutagenicity : Category 2
Carcinogenicity : Category 1
Reproductive toxicity : Category 1
Specific target organ toxicity (Single exposure)
: Category 3 <respiratory>
: Category 3 <anesthesia>
Specific target organ toxicity (Repeated exposure)
: Category 1 <respiratory organ>
Hazardous to the aquatic environment - Acute hazard
: Category 2
Hazardous to the aquatic environment - Chronic hazard
: Category 2

HAZARDS SYMBOL :



SIGNAL WORD : Danger

HAZARD STATEMENTS :

H332 Harmful if inhaled
H315 Cause skin irritation
H319 Cause serious eye irritation
H341 Suspected of causing genetic defects
H350 May cause cancer
H360 May damage fertility or the unborn child
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H370 Cause damage to organs
H336 May cause drowsiness or dizziness
H372 Cause damage to organs through prolonged or repeated exposure
H401 Toxic to aquatic life
H411 Toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS :

P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathing gas/mist/vapours.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection.
P312	Call a POISON CENTER or doctor if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water.
P332+P313	If skin irritation occurs: Get medical attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P304+P340	IF INHALED: Remove person to fresh air and akeep comfortable.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical attention.
P308+P313	IF exposed or concerned: Get medical attention.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with all applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY	: Trichloroethylene
SYNONYMS	: Trichlene; 1,1-Dichloro-2-chloroethylene
CHEMICAL FOMULA	: CHCl=CCl ₂
CONTENT	: > 99 %
MOLECULAR WEIGHT	: 131.39
CAS No.	: 79-01-6
TSCA INVENTORY	: Listed
EINECS No.	: 201-167-4
EC INDEX No.	: 602-027-00-9

4. FIRST AID MEASURES

GENERAL ADVICE	: Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.
INHALATION	: Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.
SKIN CONTACT	: Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, consult a physician.
EYE CONTACT	: Remove any contact lenses at once. Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. Consult a physician.
INGESTION	: Rinse mouth. Never give anything by mouth to an unconscious person. Consult a physician immediately.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	: Carbon dioxide, dry chemical powder, foam, water spray
FIRE & EXPLOSION HAZARDS	: Toxic, irritating fumes or smoke may be emitted.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS	: Fireman should wear normal protective equipment(full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- PERSONAL PRECAUTIONS** : Remove ignition sources and ventilate the area.
In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.
- ENVIROMENTAL PRECATIONS** : Prevent spills from entering sewers, watercourses or low areas.
- METHODS FOR CLEAN UP** : Do not touch spilled material without suitable protection. After material is completely picked up, wash the spill site with soap and water and ventilate the area. Pull all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose contaminated clothing.

7. HANDLING AND STORAGE

- HANDLING** : Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Handle material with suitable protection.
After using this product, dispose of contents/container in accordance with all applicable regulations and appropriate ways.
- STORAGE** : Store away from sunlight in cool (2-10°C) place.
Keep container tightly closed.
- INCOMOPATIBLE PRODUCTS** : Strong oxidizers, strong bases, metals

8. EXPOSURE CONTROL/PERSONAL PROTECTION

- ENGINEERING MEASURES** : Use exhaust ventilation to keep airborne concentrations below exposure limits.
Use only with adequate ventilation.
- VENTILATION** : Local Exhaust ; Necessary, Mechanical(General) ; Recommended
- PERSONAL PROTECTION**
- RESPIRATORY PROTECTION** : Use respirators approved under appropriate government standards and follow all regulations.
- HAND PROTECTION** : Protective gloves
- EYE PROTECTION** : Safety glasses(goggles)
- SKIN PROTECTION** : Protective clothing
- CONTROL PARAMETERS**
- OSHA** : TWA= 100ppm, Ceiling= 200ppm
- ACGIH** : TWA= 10ppm ; STEL= 25ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

- APPEARANCE** : Colorless – clear
- SHAPE** : Liquid
- ODOR** : Characteristic odor
- pH** : No data available
- BOILING POINT** : 87°C
- MELTING POINT** : -73°C
- FLASH POINT** : No data available
- FLAMMABILITY** : Lower; 8%, Upper; 10.5%
- AUTOIGNITION TEMPERATURE** : 410°C
- VAPOR PRESSURE** : 7.8kPa
- VAPOR DENCITY** : 4.5(Air=1)
- SPECIFIC GRAVITY** : 1.461~1.469(20°C)
- SOLUBILITY IN**
- WATER** : Slightly soluble
- Organic solvent** : Miscible
- PARTITION COEFFICIENT: n-octanol/water** : 2.42
- DECOMPOSITION TEMPERATURE** : No data available

10. STABILITY AND REACTIVITY

- REACTIVITY** : Stable under recommended storage conditions.
- CHEMICAL STABILITY** : Decomposes on air, moisture, sunlight.
- CONDITION TO AVOID** : Heat, sunlight, other ignition sources
- INCOMPATIBLE MATERIALS** : Strong oxidizers, strong alkalis, light metals
- HAZARDOUS DECOMPOSITION PRODUCTS** : CO, CO₂, Hydrogen chloride, chlorine, phosgene

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY -inhalation- : rat - LC50=26 mg/L/4hr conversion 4800ppm(NICNAS No.8 (2000))
SKIN CORROSION/IRRITATION : Rabbit: severe irritation (EU-RAR No.31 (2004))
EYE DAMAGE/EYE IRRITATION : Rabbit: mild irritation (EU-RAR No.31 (2004))
GERM CELL MUTAGENICITY : negative (EU-RARNo.31(2004)), (ATSDR (1997))
CARCINOGENICITY : IARC (1995) : 2A, NTP(2005) : R
REPRODUCTIVE TOXICITY : No data available
SPECIFIC TARGET ORGAN TOXICITY : No data available
ASPIRATION TOXICITY : No data available

12. ECOLOGICAL INFORMATION

ECOTOXICITY : Daphnia magna: EC50=7.40mg/L/48hr
BIODEGRADABILITY : No data available
BIOACCUMULATION POTENTIAL : No data available
MOBILITY IN SOIL : No data available
OTHER ADVERSE EFFECTS : Not listed in Montreal Protocol.

13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION

IATA
UN NUMBER : 1710
UN PROPER SHIPPING NAME : Trichloroethylene
CLASS or DIVISION : 6.1
PACKING GROUP : III
ADR/RID : 1710, Trichloroethylene
DOT : 1710, Trichloroethylene
MARINE POLLUTANT : Not classified

15. REGULATORY INFORMATION

US REGULATIONS : Labeling according to US Directives; See section 2
EU REGULATIONS : Labeling according to EC Directives; See section 2

16. OTHER INFORMATION**NOTICE:**

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.