

Safety Data Sheet

1. Product and company identification

Product name : Tetraethylene glycol
Name of manufacturer : KANTO CHEMICAL CO., INC.
Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan
Name of section : Reagent division, catalog and products information section
Telephone number : +81-3-6214-1090
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SDS No. : 40833

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Flammable liquids : Out of category

Pyrophoric liquids : Out of category

Human health hazard

Acute toxicity(oral) : Out of category

Acute toxicity(dermal)

: Out of category

Skin corrosion • Irritation

: Out of category

Serious eye damage • Eye irritation

: Category 2B

Environmental hazard

Hazardous to the aquatic environment-acute hazard

: Out of category

Hazardous to the aquatic environment-chronic hazard

: Out of category

Signal word : Warning

Hazard statement : Causes eye irritation

Cautions

First-aid measures : If in eyes : Rinse cautiously with water for several minutes. Get medical treatment.

Wash hands thoroughly after handling.

3. Composition/Information on ingredients

Substance/Mixture : Substance

Chemical name or commercial name

: Tetraethylene glycol

Ingredients and composition

: Tetraethylene glycol min. 97.0%



Chemical formula : HOCH₂CH₂(OCH₂CH₂)₃OH
CAS No. : 112-60-7
TSCA Inventory : Registered
EINECS No. : 2039899

4. First aid measures

Inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.
Skin contact : Wash the affected areas under running water.
Eye contact : Wash the affected areas under running water for at least 15 minutes.
If necessary, get medical treatment.
Ingestion : Give the victim water or salt water and make him vomit. Get medical attention.
Protection for first aid person : Savers wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Extinguishing media : Water, dry chemical powder, carbon dioxide, dry sand
Prohibited extinguishing media : None
Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.
Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale fire.
Protection for firefighters : Wear breathing apparatus.

6. Accidental release measures

Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of vapor. Keep personnel removed from and upwind of fire. Shut off all sources of ignition. Keep away personnel except for authorized ones from spillage area by stretching ropes.
Cautions for environment : Attention should be given not to cause damage to the environment by flowing of spillage to rivers. In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.
Removal measure : Absorb spill with inert material (e.g., diatomaceous earth, sand) and flush residual area with copious amounts of water.
Prevention of second accident : Remove nearby sources of ignition and prepare extinguishing media.

7. Cautions of handling and storage

Handling
Engineering measures : Wear proper equipment not to contact with skin or inhale the vapor.
Fire is strictly prohibited.
Ventilate well at working places.
Cautions for safety handling : Use with an enclosed system or a local exhaust ventilation.
Cautions : Do not contact with oxidizing substances.



Storage

Adequate storage condition

: Store in a dark, cool place and tightly closed.

Safety adequate container materials

: Glass, fluorine resin, stainless steel

8. Exposure control/Personal protection

Engineering measures : Use only with adequate ventilation and in closed systems.

Control parameters

ACGIH(2009) : Not established

Protective equipment

Respiration protective equipment

: If necessary, wear chemical cartridge respirator with an organic vapor cartage

Hands protective equipment

: Impervious protective gloves

Eyes protective equipment

: Safety goggles

Skin and body protective equipment

: Protective clothing, protective boots

9. Physical and chemical properties

Appearance : Liquid

Color : Colorless-pale yellow

Odor : Odorless

Boiling point : 327.3°C

Melting point : -6.2°C

Flash point : 173.9°C

Auto-ignition point : 340°C

Explosion characteristics

Explosion limit : upper : 3.4vol% lower : 0.5vol%

Vapor pressure : 0.01hPa(20°C)

Vapor density : 6.7

Specific gravity : 1.12g/ml(20°C)

Solubility

Solubility in solvents : Water ; Freely soluble

Organic solvents : Soluble in ethanol, insoluble in benzene, toluene.

Other data : Viscosity : 55cP(20°C)

10. Stability and reactivity

Stability : Stable under normal usage.

Reactivity : May react with oxidizing substances.

Incompatible conditions : Light, heat

Incompatible materials : Oxidizing substances



Hazardous decomposition products

: Carbon monoxide

11. Toxicological information

Acute toxicity : Oral : Out of category

Dermal : Out of category

Inhalation(vapor) : Not possible to classify because of insufficient data.

Inhalation(dust, mist) : Not possible to classify because of insufficient data.

rat oral LD50=29g/kg

rabbit skin LD50>20g/kg

Skin corrosiveness : Out of category

Causes irritation to the skin of rabbits, however, it was set into out of category.

Irritation to skin, eyes : Causes eye irritation(category 2B)

Since causes irritation slightly to the eyes of rabbits, it was classified into category 2B.

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of insufficient data.

Skin sensitization : Not possible to classify because of insufficient data.

Mutagenicity : Not possible to classify because of insufficient data.

Carcinogenic effects : Not possible to classify because of insufficient data

Effects on the reproductive system

: Not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure

: Not possible to classify because of insufficient data.

If swallowed, may cause nausea, vomiting, abdominal pain, however, it is not possible to classify because of insufficient data.

Specific target organ systemic toxicity repeated exposure

: Not possible to classify because of insufficient data.

Aspiration hazard

: Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity : Acute aquatic toxicity : Out of category

Chronic aquatic toxicity : Out of category

Rainbow trout LC50>1000mg/l/96H

Rediualbility and degradability

: Not available

Ecorediualbility

: Not available

13. Disposal consideration



Residual disposal : Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Containers : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class : It is not regulated under UN regulations.

15. Regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

References Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd. (1985)

Solvents Handbook, T, Asahara et al, Kodansha Scientific Ltd. (1976)

Dangerous Properties of Industrial Materials, 6th ed. N. I. Sax Van Nostrand Reinhold Company (1984)

Handbook of 15710 Chemical Products, The Chemical Daily Co. (2010)

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet (SDS) is prepared based on JIS Z7253, and it has the same required elements on the Material Safety Data Sheet (MSDS) which is prepared based on JIS Z7250:2010.