SAFETY DATA SHEET according to GB/T 16483 and GB/T 17519

Tri(propylene glycol) diacrylate

2025.03.01

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Tri(propylene glycol) diacrylate
Product Number : /
Brand : /
CAS-No. : 42978-66-5

1.2 Details of the supplier of the safety data sheet

Company : Yixing Wencheng Chemical Co., Ltd.
CANGPU village, Yicheng street, Yixing City,
Jiangsu Province, China

Telephone : +86 0510 87501824
Fax : +86 0510 87501824

1.3 Emergency telephone

Emergency Phone # : +86 0510 87501824

1.4 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For R&D and industry use. Not for pharmaceutical, household or other uses.

SECTION 2: Hazards identification

Summary of emergency

Causes skin irritation., May cause an allergic skin reaction., Causes serious eye irritation., May cause respiratory irritation., Toxic to aquatic life with long lasting effects. Show this material safety data sheet to the doctor in attendance. After inhalation: fresh air. In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower., Consult a physician. After eye contact: rinse out with plenty of water., Call in ophthalmologist., Remove contact lenses. After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free., Pulmonary failure possible after aspiration of vomit., Call a physician immediately. Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

2.1 GHS Classification

Skin corrosion/irritation (Category 2), H315
Serious eye damage/eye irritation (Category 2A), H319
Skin sensitization (Category 1), H317
Specific target organ toxicity - single exposure (Category 3), respiratory tract irritation, H335
Short-term (acute) aquatic hazard (Category 2), H401
Long-term (chronic) aquatic hazard (Category 2), H411
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Warning

Hazard statement(s)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention

P261	Avoid breathing mist or vapors.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.

Response

P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P391	Collect spillage.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Physical and chemical hazards

Referring to current information, no physical or chemical hazard.

2.4 Health hazards

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.

2.5 Environmental hazards

H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

2.6 Other hazards

No data available.

SECTION 3: Composition/information on ingredients

Substance / Mixture : Substance

3.1 Substances

Formula : C15H24O6
Molecular weight : 300.35 g/mol
CAS-No. : 42978-66-5
EC-No. : 256-032-2

Hazardous ingredients

Component	Classification	Concentration
Tri(propylene glycol) diacrylate, mixture of isomers	Skin corrosion/irritation Category 2; Serious eye damage/eye irritation Category 2A; Skin sensitization Category 1; Specific target organ toxicity - single exposure Category 3; Short-term(acute) aquatic hazard Category 2; Long-term(chronic) aquatic hazard Category 2; H315, H319,H317, H335, H401, H411	≥80%

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact
After eye contact: Wash off with plenty of flowing water and seek medical attention immediately.

If swallowed
After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

4.4 Notes to physician
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Carbon oxides
Combustible.
Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Small leakage: Collect the leaked liquid in a container that can be sealed as much as possible. Absorb with sand, activated carbon, or other inert materials and transfer to a safe location. Do not flush into the sewer.
Massive leakage: Build embankments or dig pits for containment. Close the drainage pipeline. Cover with foam to inhibit evaporation. Transfer to a tank truck or dedicated collector using an explosion-proof pump for recycling or transportation to a waste disposal site for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed.
Light sensitive. Hygroscopic.

Storage class
No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
required

Body Protection
protective clothing

Respiratory protection
required when vapours/aerosols are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Physical state	liquid
b)	Color	colorless or faint yellow
c)	Odor	No data available
d)	Melting point/freezin point	No data available
e)	Initial boiling point and boiling range	No data available

f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	153 °C - closed cup
i)	Autoignition temperature	No data available
j)	Decompositio temperature	No data available
k)	pH	5-7
l)	Viscosity	8-16 cps@25℃
m)	Water solubility	No data available
n)	Partition coefficient: n-octanol/water	No data available
o)	Vapor pressure	No data available
p)	Density	1.045 g/cm3
q)	Relative vapor density	No data available
r)	Particle characteristics	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available
u)	Acid value	≤0.3 mg KOH/g

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.2 Possibility of hazardous reactions

No data available

10.3 Conditions to avoid

May polymerize on exposure to light. Avoid moisture.
Strong heating.

10.4 Incompatible materials

Strong oxidizing agents, Free radical initiators

10.5 Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - female - > 2,000 mg/kg (Tri(propylene glycol) diacrylate, mixture of isomers)
(OECD Test Guideline 423)
Inhalation: No data available
LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg (Tri(propylene glycol) diacrylate, mixture of isomers)
(OECD Test Guideline 402)

Skin corrosion/irritation Remarks:
Causes skin irritation.

Classified according to
Regulation (EU) 1272/2008,
Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation Eyes -
Rabbit (Tri(propylene glycol) diacrylate,
mixture of isomers)
Result: Mild eye irritation - 24 h (OECD
Test Guideline 405)
Remarks: Causes serious eye irritation.
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse (Tri(propylene glycol) diacrylate, mixture of isomers)
Result: positive
(OECD Test Guideline 429)
May cause an allergic skin reaction.Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
(Tri(propylene glycol) diacrylate, mixture of isomers)

Germ cell mutagenicity Type:
gene mutation test
(Tri(propylene glycol) diacrylate, mixture of isomers)
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
Test Type: In vitro mammalian cell gene mutation test
(Tri(propylene glycol) diacrylate, mixture of isomers)
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Result: positive Remarks: (ECHA)
(Tri(propylene glycol) diacrylate, mixture of isomers)
Test Type: In vivo micronucleus test
Species: Mouse
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity
No data available

Reproductive toxicity No
data available

Specific target organ toxicity - single exposure
May cause respiratory irritation. - Respiratory system (Tri(propylene glycol) diacrylate,
mixture of isomers)

Remarks: Classified according to Regulation (EU)1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard No data available

11.2 Additional Information

Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 375 mg/kg
(Tri(propylene glycol) diacrylate, mixture of isomers)

Repeated dose toxicity - Rat - male and female - Dermal - 90 d - LOAEL (Lowest observed adverse effect level) - 20 mg/kg
(Tri(propylene glycol) diacrylate, mixture of isomers)
RTECS: AT4690000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Tri(propylene glycol) diacrylate, mixture of isomers)

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	static test LC50 - Leuciscus idus (Golden orfe) - > 4.6 - < 10 mg/l - 96 h (Tri(propylene glycol) diacrylate, mixture of isomers) (DIN 38412)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna Straus (Water flea) - 89 mg/l - 48 h (Tri(propylene glycol) diacrylate, mixture of isomers) (Regulation (EC) No. 440/2008, Annex, C.2)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - 65.9 mg/l - 72 h (Tri(propylene glycol) diacrylate, mixture of isomers) (DIN 38412)
Toxicity to bacteria	Respiration inhibition EC50 - Sludge Treatment - > 1,000 mg/l - 30 min (Tri(propylene glycol) diacrylate, mixture of isomers) (OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability: aerobic - Exposure time 28 d (Tri(propylene glycol) diacrylate, mixture of isomers)

Result: 48 % - Partially biodegradable.
(OECD Test Guideline 301B)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

SECTION 14: Transport information 14.1

UN number

ADR/RID: 3082 IMDG: 3082 IATA-DGR: 3082

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tri(propylene glycol) diacrylate, mixture of isomers)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tri(propylene glycol) diacrylate, mixture of isomers)

IATA-DGR: Environmentally hazardous substance, liquid, n.o.s. (Tri(propyleneglycol) diacrylate, mixture of isomers)

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA-DGR: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA-DGR: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA-DGR: yes

14.6 Special precautions for user

14.7 Incompatible materials

Oxidizing agentsStrong acids, Strong oxidizing agents, Strong bases, Brass, Copper, Steel (all types and surface treatments), Iron and iron salts.

Further information

Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H315 Causes skin irritation.

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.