

SAFETY DATA SHEET

According to Regulation (EC) No 2025/1731



THPE

Version
1.0

Date of revision:
21.10.2025

Country/language:English

Heading 1: Identification of the substance or mixture and of the company/undertaking

- 1.1 Product identification

Trade name

Product code

REACH Registration Number

4,4',4''-(ethane-1,1,1-triyl)triphenol

THPE

N/A
- 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance or Mixture

Additives for use in the manufacture of branched polycarbonates
- 1.3 Details of the supplier of the safety data sheet

Signature

MR Tek Ltd

Establishment address

Room 06,13A/F., South Tower, World Finance Center, Harbour City, 17 Canton Road | Tsim Sha Tsui, Kowloon, Hong kong| China
- 1.4 Emergency telephone number

Emergency telephone number

Cases

086 1378 1854 7689

Heading 2: Identification of hazards

- 2.1 Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

(Chronic) Long-term aquatic hazard H411: Toxic to aquatic organisms with long-term effects.

Deadline, category 2
- 2.2 Labelling elements

Labelling (Regulation (EC) No 1272/2008)

Hazard pictograms

Hazard indications

H411 Toxic to aquatic organisms with long-lasting effects.

Safety recommendations

Prevention:

P273 Prevent release into the environment.

Measures:

P391 Clean up leaked/spilled dust.

Removal:

P501 Dispose of contents/packaging to an approved waste treatment facility.
- 2.3. Other hazards

This substance/mixture does not contain any components that can be considered persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0, 1% or higher.
- ### Heading 3: Composition and information on the ingredients
- #### 3.1 Substances
- | Ingredients | | | |
|---|-------------------------|----------------------------|-----------------------|
| Chemical name | CAS No EC No | Grading | Concentration (% w/w) |
| 4, 4 ', 4 ''-(ethane-1, 1, 1-triyl) triphenol | 27955-94-8
405-800-7 | Aquatic Chronic 2;
H411 | >= 90 - <= 100 |
- ### Heading 4: First aid measures
- 4.1. Description of First Aid Measures

General opinion

Take out of the hazardous zone.

Show this Safety Data Sheet to the doctor on duty.

By inhalation

In case of unconsciousness, use a stable lateral position and seek medical help.

If symptoms persist, seek medical advice.

Skin contact

If skin irritation persists, seek medical advice.
In case of contact with skin, rinse well with water in case of contact with clothing, remove clothing.

In contact with eyes

Rinse eyes with water as a precaution.
Remove contact lenses.
Protect the undamaged eye.
Keep your eyes open while rinsing.
If eye irritation persists consult a specialist

If swallowed

Keep the airway clean.
Do not give milk or alcoholic beverages.
Never let an unconscious person drink (or eat). If symptoms persist, seek medical advice.

4.2 Main Acute and Delayed Symptoms and Effects

Nothing known.

4.3 Indication of Immediate Medical Attention and Special Treatment Required

Treatment No special measures are required.

SECTION 5: Firefighting measures

5.1 Extinguishing agents

Appropriate extinguishing agents In case of fire water/water mist/water jet/carbon dioxide/sand/foam/alcohol best
Use foam/dry powder to extinguish.

Dried powder

Unsuitable extinguishing agents

Strong water jet

5.2 SPECIAL HAZARDS CAUSED BY THE SUBSTANCE OR MIXTURE

Specific hazards in Fire fighting Prevent extinguishing water from flowing away into sewers or waterways.

Hazardous combustion products

Carbon dioxide (CO₂)
Carbon monoxide

5.3 Advice for firefighters Special protective equipment

Equipment for firefighters

If necessary, wear a compressed air mask when fighting fires.

Further information

Collect contaminated extinguishing water separately. It must not be discharged into the sewage system. Incineration residues and contaminated extinguishing water should be disposed of in accordance with local regulations

Section 6: Measures in the event of accidental release of the substance or mixture

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautionary measure Use personal protective equipment.
Avoid dust formation.
Avoid inhalation of dust.

6.2 Environmental precautions

Environmental precautions

Avoid disposal of the product.
Prevent further leakage and spillage if safe.
If the product pollutes rivers, lakes or sewers, notify the relevant authorities

6.3 Containment and cleaning methods and materials

Cleaning methods Store in suitable and closed containers for disposal

6.4 Reference to other headings

For personal protection see section 8., For disposal instructions see section 13.

Heading 7: Handling and storage

7.1 Precautions for the Safe Handling of the Substance or Mixture

ADVICE ON SAFE HANDLING

Avoid contact with eyes and skin.
For personal protection, see section 8.
Do not smoke, eat or drink at work.
Discharge rinsing water in accordance with local and national regulations.

**Protection advice
Hygienic measures against**

Provide adequate exhaust ventilation in dust areas.

fire and explosion

Do not eat or drink during use. Do not smoke during use
Wash your hands before every break in work and at the end of the workday.

7.2 Conditions for Safe Storage, Including Incompatible Products

Storage space requirements; and Container

Keep container tightly closed in a dry and well-ventilated place.
Close opened containers carefully and keep them upright to prevent leakage.
Electrical installations/working materials must comply with technical safety standards.

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7.3 Specific End-Use

Specific use	No data available
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Heading 8: Exposure control measures/personal protection

8.1 Control Parameters

The product does not contain any ingredients for which exposure values have been established.

8.2 Exposure Control Measures

Technical measures

When dust, smoke, gas, vapour or mist is generated by the user's actions, use a closed installation, local exhaust or other technical control means to keep occupational exposure below all recommended or legal limit values.

Personal protective equipment

Eye protection	Safety goggles with side flaps Eye rinse bottle with pure water
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Hand protection	
Material	Butyl rubber-IIR
Breakthrough time	480 min
Glove thickness	0.7 mm
Time of use	< 60 min

Material	Chloroprene
Breakthrough time	480 min
Glove thickness	0.65 mm
Time of use	< 60 min

Remarks	Be aware that the durability of chemicals Protective gloves can in practice be considerably shorter than the soaking time according to EN 374 due to numerous external influences (such as temperature). Follow the requirements for permeability and soaking time provided by the supplier of the gloves. Also take into account specific local conditions of use, such as risk of cuts, wear and contact time
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Skin and body	Wear appropriate protective clothing.
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Protection	
Respiratory protection	In case of dust development, a dust filter.
Hailing routes	

Heading 9: Physical and chemical properties

9.1 Information on Basic Physical and Chemical Properties

Occurrence	Powder
Color	White, beige
Odour	Odourless
Odour threshold value	No data available
pH	No data available
Melting point/trajectory	245 - 248 °C
Boiling point/boiling path	No data available
Flashpoint	Not applicable
Evaporation rate	No data available
Brandgetal	No data available
Upper explosion limit/upper flammability limit	No data available
Lower explosion limit/lower	No data available

Flammability limit	
Vapor pressure	< 0.0001 hPa (25 °C)
Relative density	No data available
Density	1.226 g cm ³ (20 °C)
Solubility	
Solubility in water	0.0251 g/l
Solubility in other solvents	No data available
Partition coefficient: noctanol/water	No data available
Analysis temperature	No data available
Viscosity	
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Explosion characteristics	No data available
Oxidizing properties	No data available
9.2 OTHER	
Self-ignition	No data available

Heading 10: Stability and reactivity

10.1 Reactivity

No decomposition when stored and applied as indicated.

10.2 Chemical Stability

The product is chemically stable.

10.3 Possible Hazardous Reactions

Hazardous reactions Nothing known.

10.4 Conditions to Be Avoided

Conditions to be avoided Avoid dust accumulation in enclosed spaces.
In the case of organic products with dust formation, the possibility of a dust explosion should generally be taken into account.

10.5 Chemically Interacting Materials

Materials to be avoided Oxidant

10.6 Hazardous Decomposition Products

No data available

Heading 11: Toxicological information

11.1 Information on Toxicological Effects Acute

Toxicity

Not classified based on available Information

Ingredients:

4, 4', 4''-(ethane-1, 1, 1-triyl) triphenol:

Acute oral toxicity LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity LD50 (rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Not classified based on available Information.

Ingredients:

4, 4', 4''-(ethane-1, 1, 1-triyl) triphenol:

Assessment No skin irritation

Serious eye injury/irritation

Not classified based on available Information.

Ingredients:

4, 4', 4''-(ethane-1, 1, 1-triyl) triphenol:

Assessment No eye irritation

Respiratory/skin sensitisation Skin sensitisation

Not classified based on available Information

Respiratory sensitization

Not classified based on available Information.

Mutagenicity in germ cells

Not classified based on available Information.

Ingredients:
4, 4', 4''-(ethane-1, 1, 1-triyl)
triphenol: Genotoxicity in vitro

Test system: Bacteria
Result: negative

Carcinogenicity
Not classified based on available
Reproductive toxicity
Not classified based on available
Single exposure shock
Not classified based on available
Repeated shock
Not classified based on available
Aspiration toxicity
Not classified based on available
Further information

Information.
Information
Information.
Information.
Information.

Product:
Remarks No data available

Heading 12: Environmental information

12.1 Toxicity

Ingredients:
4, 4', 4''-(ethane-1, 1, 1-triyl) triphenol:

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)): > 19 mg/l Exposure time: 96 h
Toxicity to daphnia; and Other aquatic invertebrates Toxicity	EC50 (Daphnia magna (large water level)): 13 mg/l Exposure time: 48 h
to algae/aquatic plants	NOEC (Desmodesmus subspicatus (green algae)): 0, 23 mg/l End point: biomass Exposure time: 72 h EC50 (Desmodesmus subspicatus (green algae)): 37 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (chronic toxicity)	NOEC: 0.16 mg/l Exposure time: 21 days Species: Daphnia (waterflies)

12.2 Persistence and degradability

Ingredients:
4, 4', 4''-(ethane-1, 1, 1-triyl)
triphenol: biodegradability

Result: not easily biodegradable.

12.3 Bioaccumulation

No data available

12.4 Soil mobility

No data available

12.5 Results of the PBT and ZPZB assessment

Product:
Assessment

This substance/mixture does not contain any components that can be considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0, 1% or higher.

12.6 Other adverse effects

No data available

Section 13: Disposal instructions

13.1 Waste treatment methods

Product	The product must not leak into sewage, water or soil. Do not contaminate ponds, waterways and ditches with chemicals or used packaging. Transfer to licensed disposal facility.
Contaminated packaging	Remove any remaining residue. Discard as unused product. Do not reuse empty containers.

Heading 14: Transport information

14.1 UN number

AND/ADR/RID/IMDG/IATA UN 3077

**14.2 Correct cargo name according to
AND/ADR/RID/IMDG/IATA****The UN Model Regulations**

Environmentally hazardous solid, n.e.c. (4, 4', 4"-
(ETHANE-1, 1, 1-triyl) triphenols)

**14.3 Transport hazard class (s)
AND/ADR/RID/IMDG/IATA**

9

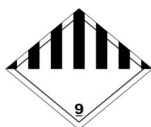
**14.4 Packing group
AND/ADR/RID**

Packing group
Classification code
Hazard identification

III
M7
90

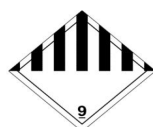
Label

9

**IMDG**

Packing group
Label

III
9



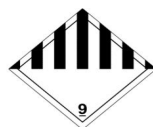
EmS Code

F-A, S-F

IATA (cargo/passenger)

PACKAGING REQUIREMENT (CARGO
AIRCRAFT) PACKAGING GROUP
Label

956 : 400,00 KG
III Miscellaneous

**14.5 Environmental hazards
AND/ADR/RID/IMDG/IATA**
Environmentally hazardous

Yes

**14.6 Special Precautions for the User**

Instructions on hazards and use.

Environmentally hazardous, Separation of food and pleasure products

The transport classification (s) given herein are for information purposes only and are based solely on the properties of the unpackaged material as described in this safety data sheet. Transport classifications may vary in terms of mode of transport, packaging size and regional or regional variations. National rules.

14.7 Bulk Transport in Accordance With MARPOL Annex II and the IBC Code

Not applicable to product as supplied.

Heading 15: Regulations

15.1 Specific safety, health and environmental regulations and legislation for the substance or mixture

REACH-RESTRICTIONS ON MANUFACTURING, MARKETING AND SUPPLY
Use of certain dangerous substances, preparations and articles (Annex XVII)

Not applicable

List of toxic chemicals and precursors (intermediates)

Not applicable

International Chemical Weapons Convention (CWC)

This product does not contain substances of very high concern

REACH-Candidate list of substances of very high concern for authorisation (Article 59).

(Regulation (EC)

1907/2006 (REACH), Article 57).

REACH-List of substances subject to authorisation (Annex XIV)

Not applicable

Verordening (EG) nr. 1005/2009 on substances that deplete the ozone layer

Not applicable

Regulation (EC) 2019/1021 on persistent organic pollutants
Substances (recast)

Not applicable

Verordening (EG) nr. Regulation (EC) No 649/2012 of the European Parliament and of the Council on
Import and export of hazardous chemicals

Not applicable

15.2 Chemical Safety Assessment

A chemical safety assessment has been carried out for this substance.

Heading 16: Other information

Full text of other abbreviations

ADN-European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR-European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR Agreement); AICS-Australian Chemical Inventory List; ASTM-American Society for Testing Materials; BW-LI Chaam weight; CLP Regulation on classification, labelling and packaging; Regulation (EC) No 1272/2008; CMR-carcinogenic, mutagenic or toxic to reproduction; DIN standard or the German Institute for Standardisation; DSL-Lijst met binnenshuis gebruikte stof FEN (Canada); ECHA-European Chemicals Agency; EC number-EINECS Number; ECx-concentration associated with x% response; ELx-load capacity associated with x% response; EMS-Emergency Schema; ENCS existing and new chemicals (Japan); ERCx-concentration associated with X% growth response; GHS-globally harmonised system; GLP-Good Laboratory Practice; IARC-International Agency for Research and Development; IATA-International Air Transport Association; IBC-IMO International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk; IC50-half maximal inhibitory concentration; ICAO-International Civil Aviation Organisation; IECSC Inventory List of Existing Chemicals in China; IMDG-International Maritime Dangerous Goods; IMO-International Maritime Organisation; ISHL-Industrial Safety and Health Act (Japan); ISO-International Organisation for Standardisation; KECI-Korean Inventory of Existing Chemicals; LC50-50% lethal concentration
Test population; LD50-lethal dose for 50% of a test population (lethal dose median); MARPOL-International Convention for the Prevention of Pollution from Ships; n. Oh. s. -not otherwise specified, NO (A) EC-NO observable (negative) effect on concentration; NO (A) EL-NO observable (negative) effect on level; NOELR-no noticeable effect on load capacity; NZIOC New Zealand Chemical Inventory List; OECD-Organisation for Economic Cooperation and Development OECD; OPPTS Bureau voor chemische veiligheid en vervuilingspreventie; PBT-poorly degradable, bioaccumulative and toxic substance; PICCS Philippine Inventory of Chemicals and Chemicals; (Q) SAR-(quantitative VE) structure-activity relationships; REACH Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH); RID-Regulations concerning the International Carriage of Dangerous Goods by Rail (RID); SADT-self-accelerating decomposition temperature;

Further information

The data in this safety data sheet is based on our current knowledge and experience and describes the product only with regard to safety requirements. The information provided is intended only as a guideline for the safe handling, use, processing, storage, transport, disposal and release and should not be considered as a guideline for processing and does not contain Single guarantee or quality specification.

The information relates only to the specific material indicated and may not be valid for such material in combination with other materials or in any process, unless otherwise indicated in the text. It is the

Responsibility of the recipient of the product to ensure that all proprietary rights and existing laws and regulations are observed.