

Chemical Safety Data Sheet MSDS / SDS

4,4',4''-TRIS(BENZOYLOXY)TRITYL BROMIDERevision Date:2026-05-31 Revision Number:1

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

Product name : 4,4',4''-TRIS(BENZOYLOXY)TRITYL BROMIDE
CBnumber : CB5436921
CAS : 86610-66-4
Synonyms : 4,4',4''-Tris(benzoyloxy)trityl bromide

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification**GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Warning

Precautionary statements

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: wash with plenty of soap and water.
P337+P313 IF eye irritation persists: Get medical advice/attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 IF SKIN irritation occurs: Get medical advice/attention.

Hazard statements

H319 Causes serious eye irritation
H315 Causes skin irritation

SECTION 3: Composition/information on ingredients

Substance

Product name	: 4,4',4''-TRIS(BENZOYLOXY)TRITYL BROMIDE
Synonyms	: 4,4',4''-Tris(benzoyloxy)trityl bromide
CAS	: 86610-66-4
MF	: C40H27BrO6
MW	: 683.54

SECTION 4: First aid measures

If inhaled

Remove person to fresh air and keep comfortable for breathing. Get medical advice/ attention if you feel unwell.

In case of skin contact

Take off all contaminated clothing immediately. Wash off with plenty of water. If skin irritation or rash occurs: Get medical advice/ attention.

In case of eye contact

Rinse with plenty of water. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention.

If swallowed

Get medical advice/ attention. Rinse mouth.

Most important symptoms and effects, both acute and delayed

None known.

SECTION 5: Firefighting measures

Suitable extinguishing media

Dry powder, Foam, Water spray, Carbon dioxide (CO₂)

Specific hazards during fire fighting

No information available.

Specific extinguishing methods

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for fire-fighters

Use personal protective equipment.

NFPA 704





<input type="checkbox"/> HEALTH	2	Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. diethyl ether , ammonium phosphate, iodine)
<hr/>		
<input type="checkbox"/> FIRE	0	Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)
<hr/>		
<input type="checkbox"/> REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, N2)
<hr/>		
<input type="checkbox"/> SPEC.		
<input type="checkbox"/> HAZ.		

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

Environmental precautions

Prevent product from entering drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust.

SECTION 7: Handling and storage

Handling

Technical measures

Prevent dispersion of dust.

Local/Total ventilation

Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Use a local exhaust ventilation.

Advice on safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Wash hands and face thoroughly after handling.

Avoidance of contact

Oxidizing agents

Storage

Conditions for safe storage

Keep container tightly closed. Store in a cool and shaded area. Protect from moisture. Keep under inert gas. Store locked up.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

Components	CAS RN	Value type	Control parameters	Basis
		(Form of exposure)	Permissible concentration	
Benzene	71-43-2	PC-TWA	3 mg/m ³	CN OEL
		Further information: G1 - Carcinogenic to humans, Skin		
		PC-STEL	6 mg/m ³	CN OEL
		Further information: G1 - Carcinogenic to humans, Skin		
		TWA	0.02 ppm	ACGIH

Components CAS RN Value type Control parameters Basis (Form of exposure) / Permissible concentration

Benzene 71-43-2 PC-TWA 3 mg/m³ CN OEL

Further information

G1 - Carcinogenic to humans, Skin

PC-STEL 6 mg/m³ CN OEL

Further information

G1 - Carcinogenic to humans, Skin

TWA 0.02 ppm ACGIH

Engineering measures

Install a closed system or local exhaust.

Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection

Dustproof gas mask

Self-contained breathing apparatus

Eye/face protection

Safety glasses

Safety goggles

Face-shield

Skin and body protection

Impervious protective clothing

Hand protection

Impervious gloves *Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

solid

Color

yellow - orange

Odor

No data available

Odor Threshold

No data available

pH

No data available

Melting point/freezing point

190 °C

Boiling point/boiling range

No data available

Flash point

No data available

Evaporation rate

No data available

Flammability

No data available

Upper explosion limit / Upper flammability limit

No data available

Lower explosion limit / Lower flammability limit

No data available

Vapor pressure

No data available

Solubility(ies)

Water solubility

No data available

Solubility in other solvents

No data available

Partition coefficient: n-octanol/water (log value)

No data available

Autoignition temperature

No data available

Decomposition temperature

No data available

Viscosity

Viscosity, dynamic

No data available

Viscosity, kinematic

No data available

Molecular weight

683.55 g/mol

Physical state

powder to crystal

SECTION 10: Stability and reactivity

Reactivity

No data available

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Exposure to moisture.

Incompatible materials

Oxidizing agents

Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO₂), hydrogen bromide

SECTION 11: Toxicological information

Acute toxicity

Product

Acute oral toxicity

Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components

Benzene

Acute oral toxicity

LDLo (Humans): 0.616 g/kg Assessment: The component/mixture is moderately toxic after single ingestion.

LD50 (Rat)

930 mg/kg

Acute inhalation toxicity

LC50 (Rat): 10000 ppm Exposure time: 7 h Test atmosphere: gas Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity

LD50 (Rabbit): > 8,272 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product

Result

Skin irritation

Components

4,4',4''-Tris(benzoyloxy)trityl Bromide

Result

Skin irritation

Benzene

Result

Skin irritation

Serious eye damage/eye irritation

Product

Result

Eye irritation

Components

4,4',4''-Tris(benzoyloxy)trityl Bromide

Result

Eye irritation

Benzene

Result

Eye irritation

Respiratory or skin sensitization

Classified based on available data. For more details, see section 2.

Germ cell mutagenicity

Components

Benzene

Germ cell mutagenicity - Assessment

Presumed to induce heritable mutations in the germ cells of humans.

Carcinogenicity

Components

Benzene

Carcinogenicity - Assessment

Human carcinogen.

Reproductive toxicity

Components

Benzene

Reproductive toxicity - Assessment

Suspected human reproductive toxicant

STOT-single exposure

Components

Benzene

Assessment

May cause drowsiness or dizziness.

Target Organs

Respiratory system

Assessment

Causes damage to organs.

STOT-repeated exposure

Components

Benzene

Target Organs

Central nervous system, hematopoietic system

Assessment

Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Classified based on available data. For more details, see section 2.

Aspiration toxicity

Components

Benzene

RTECS No.

CY1400000 (Benzene)

SECTION 12: Ecological information

Ecotoxicity

Components:

Benzene:

Toxicity to fish

LC50 (*Oryzias latipes* (Japanese medaka)): 54 mg/l Exposure time: 48 h LC50 (*Oncorhynchus mykiss* (rainbow trout)): 5.3 mg/l Exposure time:

96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 10 mg/l Exposure time: 48 h

Toxicity to algae/aquatic plants

EC50 (Selenastrum capricornutum (green algae)): 29 mg/l Exposure time: 72 h

Ecotoxicology Assessment

Acute aquatic toxicity

Toxic to aquatic life.

Chronic aquatic toxicity

Toxic to aquatic life with long lasting effects.

Persistence and degradability

No data available

Bioaccumulative potential

Components:

Benzene:

octanol/water (log value)

Partition coefficient: octanol/water (log value)

2.13

Mobility in soil

Components:

Benzene:

tal compartments

Distribution among environmental compartments

Koc: 85

Other adverse effects

No data available

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

Disposal in accordance with local and national regulations. Entrust disposal to a licensed waste disposal company.

Contaminated packaging

Disposal in accordance with local and national regulations. Before disposal of used container, remove contents completely.

SECTION 14: Transport information

International Regulations

IATA-DGR

UN/ID No.

Not applicable

Proper shipping name

Not applicable

Class

Not applicable

Subsidiary risk

Not applicable

Packing group

Not applicable

IMDG-Code

UN number

Not applicable

Proper shipping name

Not applicable

Class

Not applicable

Subsidiary risk

Not applicable

Packing group

Not applicable

EmS Code

Not applicable

Domestic regulation

GB 6944/12268**UN number**

Not applicable

Proper shipping name

Not applicable

Class

Not applicable

Subsidiary risk

Not applicable

Packing group

Not applicable

SECTION 15: Regulatory information

Used

Catalogue of Highly Toxic Chemicals

Listed

Measures on the Environmental Administration of New Chemical Substances Registration

Registration/Notification number

B1A232215766 058ZZG2Q0H 0ID26NZQD0 0ID26NZQD0 058ZZG2Q0H 0W0VPPHNVM 0W0VPPHNVM 0H4D4SUBQP 0BMRKD014A
0GW32ASTMO 0IU0QA0FFD

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

The ingredients of this product are reported in the following inventories

CH BAGREG

Not in compliance with the inventory

TSCA

Product contains substance(s) not listed on TSCA inventory.

AIC

Not in compliance with the inventory

DSL

This product contains the following components that are not on the Canadian DSL nor NDSL.

4,4',4''-Tris(benzoyloxy)trityl Bromide

ENCS

Not in compliance with the inventory

ISHL

Not in compliance with the inventory

KECI

Not in compliance with the inventory

PICCS

Not in compliance with the inventory

IECSC

Not in compliance with the inventory

NZIoC

Not in compliance with the inventory

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.