

Chemical Safety Data Sheet MSDS / SDS

tert-Butyl peroxyacetate

Revision Date:2026-06-27 Revision Number:1

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

Product name : tert-Butyl peroxyacetate
CBnumber : CB5852718
CAS : 107-71-1
EINECS Number : 203-514-5
Synonyms : tert-Butyl,tert-butyl peroxyacetate

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

Danger

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.
P370+P378 In case of fire: Use ... for extinction.
P403+P235 Store in a well-ventilated place. Keep cool.

Hazard statements

H226 Flammable liquid and vapour
H242 Heating may cause a fire
H302 Harmful if swallowed

H304 May be fatal if swallowed and enters airways

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H340 May cause genetic defects

H350 May cause cancer

SECTION 3: Composition/information on ingredients

Substance

Product name	: tert-Butyl peroxyacetate
Synonyms	: tert-Butyl,tert-butyl peroxyacetate
CAS	: 107-71-1
EC number	: 203-514-5
MF	: C ₆ H ₁₂ O ₃
MW	: 132.16

SECTION 4: First aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

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

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

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.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Protection of first-aiders

For personal protection see section 8.

Notes to physician

SECTION 5: Firefighting measures

Suitable extinguishing media

Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

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

Specific hazards during fire fighting

Mixture with combustible ingredients. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.

Hazardous combustion products

Carbon oxides

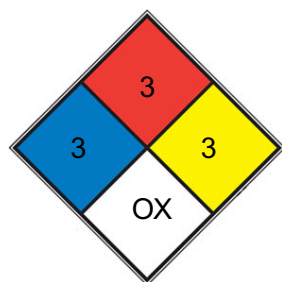
Specific extinguishing methods

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

NFPA 704



■ HEALTH 3

Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

■ FIRE 3

Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions. Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, [acetone](#))

■ REACT 3

Capable of detonation or explosive decomposition but requires a strong initiating source, must be heated under confinement before initiation, reacts explosively with water, or will detonate if severely shocked (e.g. [ammonium nitrate](#), cesium, hydrogen peroxide)

□ SPEC. HAZ. OX

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

Environmental precautions

Do not let product enter drains. Risk of explosion.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

SECTION 7: Handling and storage

Handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Avoidance of contact

Oxidizing agents Alkali metals Powdered metals Strong oxidizing agents Metals Copper Amines Reducing agents Organic materials Alcohols Peroxides permanganates, for example potassium permanganate acids Aluminum Metal oxides Soluble carbonates and phosphates Hydroxides

Storage

Further information on storage conditions

Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons. Separately or together with other organic peroxides only and away from sources of ignition and heat.

Storage class

5.2, Organic peroxides and self-reacting hazardous materials

Recommended storage temperature

Recommended storage temperature see product label.

SECTION 8: Exposure controls/personal protection

control parameter

Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

Engineering measures

No data available

Personal protective equipment

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.

Recommended Filter type

Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

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 and body protection

Flame retardant antistatic protective clothing.

Hand protection

Remarks

required

Hygiene measures

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

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

liquid

Color

light yellow

Odor

pungent

Odor Threshold

No data available

pH

No data available

Melting point/ range

-15 °C

Boiling point/boiling range

184.08°C (rough estimate)

Flash point

37 °C

Method: closed cup

Evaporation rate

No data available

Flammability (solid, gas)

No data available

Flammability (liquids)

No data available

Burning rate

No data available

Upper explosion limit / Upper flammability limit

No data available

Lower explosion limit / Lower flammability limit

No data available

Vapor pressure

1.966Pa at 25°C

Relative vapor density

No data available

Relative density

0.828 g/mL at 25 °C

Density

0.830 g/cm³ (25 °C)

Water solubility

3.878g/L at 25°C

Partition coefficient: n-octanol/water

No data available

Autoignition temperature

No data available

Decomposition temperature

No data available

Viscosity, dynamic

No data available

Viscosity, kinematic

No data available

Flow time

No data available

Explosive properties

Not classified as explosive.

Oxidizing properties

none

Molecular weight

132.16 g/mol

Particle characteristics Particle size

No data available

Physical state

Solution

SECTION 10: Stability and reactivity

Reactivity

Vapor/air-mixtures are explosive at intense warming.

Chemical stability

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

Possibility of hazardous reactions

No data available

Conditions to avoid

Heating.

Incompatible materials

Oxidizing agents Alkali metals Powdered metals Strong oxidizing agents Metals Copper Amines Reducing agents Organic materials Alcohols Peroxides permanganates, for example potassium permanganate acids Aluminum Metal oxides Soluble carbonates and phosphates Hydroxides

Hazardous decomposition products

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture Acute toxicity

Oral: No data available

Acute toxicity estimate Oral - 1,350 mg/kg (Calculation method)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute toxicity estimate Inhalation - 4 h - > 40 mg/l - vapor (Calculation method)

Symptoms: Possible symptoms: mucosal irritations, Cough, Shortness of breath,

Possible damages: damage of respiratory tract

Acute toxicity estimate Dermal - > 5,000 mg/kg (Calculation method)

Skin corrosion/irritation

Remarks: Mixture causes skin irritation.

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye irritation.

Respiratory or skin sensitization

Mixture may produce an allergic reaction.

Germ cell mutagenicity

Possible mutagen

Carcinogenicity

Possible carcinogen.

Reproductive toxicity

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

Specific target organ toxicity - single exposure

Mixture may cause respiratory irritation.

Mixture may cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

11.2 Additional Information

Nausea, Dizziness, Headache, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Components tert-Butyl peracetate

Acute toxicity

LD50 Oral - Rat - 675 mg/kg

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitization

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

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

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

Low boiling point modified naphtha Acute toxicity

LD50 Oral - Rat - > 7,500 mg/kg

Remarks: (IUCLID)

LD50 Oral - Rat - > 2,000 mg/kg

Remarks: (External MSDS)

LC50 Inhalation - Rat - 4 h - > 5 mg/l - dust/mist

Remarks: (IUCLID)

LD50 Dermal - Rabbit - > 2,000 mg/kg

Remarks: (IUCLID)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin.

Remarks: (in analogy to similar products)

Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Remarks: (IUCLID)

Respiratory or skin sensitization

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

Germ cell mutagenicity

May cause genetic defects.

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

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

Specific target organ toxicity - single exposure

Inhalation - May cause drowsiness or dizziness. - Central nervous system

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

Aspiration may cause pulmonary edema and pneumonitis.

Naphtha (petroleum), hydrotreated heavy Acute toxicity

LD50 Oral - Rat - male and female - > 5,000 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 7,630 mg/l - vapor (OECD Test Guideline 403)

LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitization

Buehler Test - Guinea pig

Did not cause sensitization on laboratory animals.

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: reverse mutation assay

Test system: *S. typhimurium*

Result: negative

Species: Rat - male and female

Result: negative

Carcinogenicity

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

Reproductive toxicity

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

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

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

tert-Butyl hydroperoxide Acute toxicity

LD50 Oral - Rat - male and female - 560 mg/kg

Remarks: Aqueous solution (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - 0.84 mg/l - vapor (OECD Test Guideline 403)

LD50 Dermal - Rabbit - male and female - 440 mg/kg (OECD Test Guideline 402)

Remarks: Aqueous solution

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days. - 24 h

Remarks: Aqueous solution

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive - 21 d

Remarks: Aqueous solution

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: positive (OECD Test Guideline 406)

Remarks: Aqueous solution

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster cells

Result: positive

Remarks: (in analogy to similar products)

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Result: positive

Remarks: (in analogy to similar products)

Test Type: Ames test

Test system: S. typhimurium

Result: positive

Remarks: (in analogy to similar products)

Method: Regulation (EC) No. 440/2008, Annex, B.12

Species: Mouse - male and female

Result: negative

Remarks: (in analogy to similar products)

Method: Regulation (EC) No. 440/2008, Annex, B.12

Species: Mouse - male

Result: positive

Remarks: (in analogy to similar products)

Species: Rat - male

Result: negative

Remarks: (in analogy to similar products) (ECHA)

Carcinogenicity

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

Reproductive toxicity

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

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Aspiration hazard

SECTION 12: Ecological information

Ecotoxicity

Components:

tert-Butyl peracetate:

Toxicity to fish

Remarks: No data available

Low boiling point modified naphtha:

Toxicity to algae/aquatic plants

IC50 (*Pseudokirchneriella subcapitata* (green algae)): 13 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Ecotoxicology Assessment

Chronic aquatic toxicity

This product has no known ecotoxicological effects.

Naphtha (petroleum), hydrotreated heavy:

Toxicity to fish

LC50 (*Pimephales promelas* (fathead minnow)): 2,200 mg/l Exposure time: 96 h

tert-Butyl hydroperoxide:

Toxicity to fish

LC50 (*Pimephales promelas* (fathead minnow)): 29.61 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes Remarks: Aqueous solution

Toxicity to daphnia and other aquatic invertebrates

EC50 (*Daphnia magna* (Water flea)): 14.1 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes Remarks: Aqueous solution

Toxicity to algae/aquatic plants

ErC50 (*Pseudokirchneriella subcapitata*): 1.5 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: Aqueous solution

Toxicity to microorganisms

EC50 (activated sludge): 17 mg/l Exposure time: 30 h Test Type: Growth inhibition Method: OECD Test Guideline 209 GLP: yes Remarks: Aqueous solution

Persistence and degradability

Components:

tert-Butyl peracetate:

Biodegradability

Remarks: No data available

Low boiling point modified naphtha:

Biodegradability

Biotic/Aerobic Result: Partially biodegradable. Biodegradation: 8 - 22 % Exposure time: 28 d Method: OECD Test Guideline 301D Remarks: (IUCLID)

Naphtha (petroleum), hydrotreated heavy:

Biodegradability

aerobic Inoculum: activated sludge Result: Readily biodegradable. Biodegradation: 77.05 % Exposure time: 28 d Method: OECD Test Guideline 301F

tert-Butyl hydroperoxide:

Biodegradability

aerobic Inoculum: activated sludge, non-adapted Concentration: 27 mg/l Result: Not readily biodegradable. Biodegradation: 0 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: yes

Bioaccumulative potential

Components:

tert-Butyl peracetate:

Bioaccumulation

Remarks: No data available

Naphtha (petroleum), hydrotreated heavy:

Bioaccumulation

Remarks: No data available

tert-Butyl hydroperoxide:

Partition coefficient: noctanol/water

log Pow: ca. 0.846 (30 °C) pH: 6.5 Method: Regulation (EC) No. 440/2008, Annex, A.8 GLP: yes

Mobility in soil

Components:

tert-Butyl peracetate:

Stability in soil

Remarks: No data available

Naphtha (petroleum), hydrotreated heavy:

Stability in soil

Remarks: No data available

Other adverse effects

Components:

tert-Butyl peracetate:

Additional ecological information

No data available

Naphtha (petroleum), hydrotreated heavy:

Additional ecological information

No data available

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

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

SECTION 14: Transport information

International Regulations

IATA-DGR

UNID No. : UN 3103

Proper shipping name : Organic peroxide type C, liquid (tert-Butyl peroxyacetate)

Class : 5.2

Packing group : Not assigned by regulation

Labels : Division 5.2 - Organic peroxides, Handling Label Keep Away From Heat

Packing instruction (cargo aircraft) : 570

Packing instruction (passenger aircraft) : 570

IMDG-Code

UN number : UN 3103

Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID (tert-BUTYL PEROXYACETATE)

Class : 5.2

Packing group : Not assigned by regulation

Labels : 5.2

EmS Code : F-J, S-R

Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National regulation

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

Listed

No. / Code Chemical name / Category Threshold quantity

W5.4 Flammable liquids 5,000 t

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

No. / Code Chemical name / Category Threshold quantity

W7.2 Organic peroxides 50 t

Hazardous Chemicals for Priority Management

Listed under SAWS

Regulations on Occupational Labor Protection in the at workplaces where

Toxic Substances Are Used

Catalogue of Highly Toxic Chemicals

Not listed

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export

Listed

Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals

Not listed

SECTION 16: Other information

Full text of other abbreviations

ACGIH

USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA AIC - Australian Invent Transport by Land of Bra bw - Body weight; CMR Standard of the German List (Canada); ECx - Conc associated with x% respo Chemical Substances (Jap response; ERG - Emerge GLP - Good Laboratory P cer; IATA - International Construction and Equipm Half maximal inhibitory c tion; IECSC - Inventory o tional Maritime Dangerou Industrial Safety and H Standardization; KECL - K tration to 50 % of a test (Median Lethal Dose); MA lution from Ships; n.o.s. No Observed (Adverse) E fect Level; NOELR - No Norm; NTP - National Toxi icals; OECD - Organizatio fice of Chemical Safety a and Toxic substance; PIC stances; (Q)SAR - (Quant (EC) No 1907/2006 of th Registration, Evaluation, Accelerating Decompositi Chemical Substance Inve Thailand Existing Chemical States); UN - United Nat Transport of Dangerous WHMIS - Workplace Hazar

8-hour, time-weighted average ry of Industrial Chemicals

ANTT - National Agency for il

ASTM - American Society for the Testing of Materials

- Carcinogen, Mutagen or Reproductive Toxicant

DIN nstitute for Standardisation

DSL - Domestic Substances ntration associated with x% response

ELx - Loading rate se

EmS - Emergency Schedule

ENCS - Existing and New n)

ErCx - Concentration associated with x% growth rate cy Response Guide

GHS - Globally Harmonized System

actice

IARC - International Agency for Research on Canir Transport Association

IBC - International Code for the nt of Ships carrying Dangerous Chemicals in Bulk

IC50 ncentration

ICAO - International Civil Aviation Organiza- Existing Chemical Substances in China

IMDG - Interna- Goods

IMO - International Maritime Organization

ISHL alth Law (Japan)

ISO - International Organisation for rea Existing Chemicals Inventory

LC50 - Lethal Concenopulation

LD50 - Lethal Dose to 50% of a test population POL - International Convention for the Prevention of Pol- Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC fect Concentration

NO(A)EL - No Observed (Adverse) Efbserveable Effect Loading Rate

NOM - Official Mexican ology Program

NZIoC - New Zealand Inventory of Chemfor Economic Co-operation and Development

OPPTS - Ofd Pollution Prevention

PBT - Persistent, Bioaccumulative S - Philippines Inventory of Chemicals and Chemical Subtative) Structure Activity Relationship

REACH - Regulation European Parliament and of the Council concerning the uthorisation and Restriction of Chemicals

SADT - Selfn Temperature

SDS - Safety Data Sheet

TCSI - Taiwan tory

TDG - Transportation of Dangerous Goods

TECI s Inventory

TSCA - Toxic Substances Control Act (United ons

UNRTDG - United Nations Recommendations on the oods

vPvB - Very Persistent and Very Bioaccumulative

ous Materials Information System

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.