



Butylated Hydroxytoluene

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

1.1. Product identifier

Product name: Butylated Hydroxytoluene
CAS Number: 128-37-0
EC Number: 204-881-4

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

Product use: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company name: East Harbour Group Ltd
 20 Clough Road, Severalls Industrial Park
 Colchester, Essex, CO4 9QS
 United Kingdom

Telephone: +44 (0) 333 242 0100
Email: info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone: 0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

Short-term (acute) aquatic hazard (Category 1), H400
 Long-term (chronic) aquatic hazard (Category 1), H410

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

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

Pictogram



Signal word

Warning

Hazard statement(s)

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)



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P273 Avoid release to the environment.
 P391 Collect spillage.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements

None

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3: Composition/information on ingredients

3.1 Substances

Synonyms 2,6-Di-tert-butyl-4-methylphenol
 BHT
 DBPC
 2,6-Di-tert-butyl-p-cresol
 Butylhydroxytoluene
 Butylated hydroxytoluene

Formula: $C_{15}H_{24}O$
 Molecular weight: 220.35 g/mol
 CAS-No.: 128-37-0
 EC-No.: 204-881-4

Component	Classification	Concentration
butyl hydroxytoluene (BHT)		
CAS-No. 128-37-0	Aquatic Acute 1; Aquatic Chronic 1; H400, H410	<= 100 %
EC-No. 204-881-4	M-Factor - Aquatic Acute:1 - Aquatic Chronic: 1	

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

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.

In case of eye contact

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

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed



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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

Section 5: Fire-fighting measures

5.1 Fire Fighting Media and Instructions:

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

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

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: Avoid inhalation of dusts. 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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

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.

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7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Storage class

Storage class (TRGS 510): 11: Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

Section 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Control parameters	Value	Basis
butyl hydroxytoluene (BHT)	128-37-0	TWA	10 mg/m ³	UK. EH40 WEL - Workplace Exposure Limits

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Worker DNEL, long-term	inhalation	Systemic effects	3.5 mg/m ³
Worker DNEL, long-term	dermal	Systemic effects	

Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	0.199µg/l
Sea water	0.0199µg/l
Aquatic intermittent release	1.99µg/l
Fresh water sediment	0.0996 mg/kg
Sea sediment	0.00996 mg/kg
Soil	0.04769 mg/kg

8.2 Exposure controls

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

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L



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Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

Respiratory protection

Recommended Filter type: Filter A-(P2)

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.

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

Physical state	Crystalline powder
Colour	colourless
Odor	odorless
Melting point/freezing point	Melting point/range: 69 - 73 °C - lit.
Initial boiling point and boiling range	265 °C - lit.
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Flash point	127 °C - open cup
Autoignition temperature	> 400 °C
Decomposition temperature	- Regulation (EC) No. 440/2008, Annex, A.16
pH	No data available
Viscosity	No data available
Water solubility	Viscosity, kinematic: No data available
Partition coefficient: n-octanol/water	Viscosity, dynamic: No data available
Vapor pressure	0.76 g/l at 20 °C - OECD Test Guideline 105- slightly soluble
Density	log Pow: 5.1 - - Potential bioaccumulation
Relative density	0.00 hPa at 25 °C - OECD Test Guideline 104
Relative vapor density	1.03 g/cm ³ at 20 °C
Particle characteristics	No data available
Explosive properties	No data available
Oxidizing properties	none

9.2 Other safety information

No data available

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Section 10: Stability and Reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Peroxides

bases

sulfuric acid

Strong acids

Acid chlorides

Acid anhydrides

Oxidizing agents

Bases

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Copper, copper compounds, brass, Mild steel.

10.6 Hazardous decomposition products

In the event of fire: see section 5

Section 11: Toxicological Information

11.1 Toxicological effects:

Acute toxicity

LD50 Oral - Rat - male and female - > 6,000 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)



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Respiratory or skin sensitization

Patch test: - In vitro study

Result: negative

Remarks: (ECHA)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test

Test system: rat hepatocytes

Metabolic activation: Metabolic activation

Result: negative

Remarks: (ECHA)

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

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Result: negative

Remarks: (ECHA)

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Intraperitoneal injection

Result: negative

Remarks: (ECHA)

Test Type: Chromosome aberration test

Species: Rat

Cell type: Bone marrow

Application Route: Oral

Result: negative

Remarks: (ECHA)

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available



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11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Pig - male and female - Oral - 42 Days - NOAEL (No observed adverse effect level) - \geq 61 mg/kg Remarks: (ECHA)

Repeated dose toxicity - Rat - male and female - Oral - 22 Months - NOAEL (No observed adverse effect level) - 25 mg/kg - LOAEL (Lowest observed adverse effect level) - 100 mg/kg
Remarks: (ECHA)

RTECS: GO7875000

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

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

Section 12: Ecological Information

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - Daphnia magna (Water flea) - 0.48 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae

static test ErC50 - Pseudokirchneriella subcapitata (green algae) - $>$ 0.24 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria

static test EC50 - activated sludge - $>$ 10,000 mg/l - 3 h (OECD Test Guideline 209)

Toxicity to fish (Chronic toxicity)

NOEC - Micropterus dolomieu - $>$ 23.8 mg/l - 70 d Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

EC50 - Daphnia magna (Water flea) - 0.096 mg/l - 21 d (OECD Test Guideline 211)

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available



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12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Discharge into the environment must be avoided.

Section 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions. Notice Directive on waste 2008/98/EC.

Section 14: Transport Information

14.1 UN number

ADR/RID	3077
IMDG	3077
IATA	3077

14.2 UN proper shipping name

ADR/RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (butyl hydroxytoluene (BHT))
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (butyl hydroxytoluene (BHT))
IATA	Environmentally hazardous substance, solid, n.o.s. (butyl hydroxytoluene (BHT))

14.3 Transport hazard class(es)

ADR/RID	9
IMDG	9
IATA	9

14.4 Packaging group

ADR/RID	III
IMDG	III
IATA	III

14.5 Environmental hazards

ADR/RID	yes
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IMDG Marine pollutant yes
IATA yes

14.6 Special precautions for user

Tunnel restriction code (-)

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging and combination packaging containing inner packaging with Dangerous Goods > 5L for liquids or > 5kg for solids. 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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

ENVIRONMENTAL HAZARDS

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance.

Section 16: Other Information

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

H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways;
ADR Agreement concerning the International Carriage of Dangerous Goods by Road;
AIIC Australian Inventory of Industrial Chemicals;
ASTM American Society for the Testing of Materials;
bw Body weight;
CMR Carcinogen, Mutagen or Reproductive Toxicant;
DIN Standard of the German Institute for Standardisation;
DSL Domestic Substances List (Canada);
ECx Concentration associated with x% response;
ELx Loading rate associated with x% response;
EmS Emergency Schedule;
ENCS Existing and New Chemical Substances (Japan);
ErCx Concentration associated with x% growth rate response;
GHS Globally Harmonized System;
GLP Good Laboratory Practice;



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IARC	International Agency for Research on Cancer;
IATA	International Air Transport Association;
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;
IC50	Half maximal inhibitory concentration;
ICAO	International Civil Aviation Organization;
IECSC	Inventory of Existing Chemical Substances in China;
IMDG	International Maritime Dangerous Goods;
IMO	International Maritime Organization;
ISHL	Industrial Safety and Health Law (Japan);
ISO	International Organisation for Standardization;
KECI	Korea Existing Chemicals Inventory;
LC50	Lethal Concentration to 50 % of a test population;
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose);
MARPOL	International Convention for the Prevention of Pollution from Ships;
n.o.s.	Not Otherwise Specified;
NO(A)EC	No Observed (Adverse) Effect Concentration;
NO(A)EL	No Observed (Adverse) Effect Level;
NOELR	No Observable Effect Loading Rate;
NZIoC	New Zealand Inventory of Chemicals;
OECD	Organization for Economic Co-operation and Development;
OPPTS	Office of Chemical Safety and Pollution Prevention;
PBT	Persistent, Bioaccumulative and Toxic substance;
PICCS	Philippines Inventory of Chemicals and Chemical Substances;
(Q)SAR	(Quantitative) Structure Activity Relationship;
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals;
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail;
SADT	Self-Accelerating Decomposition Temperature;
SDS	Safety Data Sheet;
TCSI	Taiwan Chemical Substance Inventory;
TECI	Thailand Existing Chemicals Inventory;
TSCA	Toxic Substances Control Act (United States);
UN	United Nations;
UNRTDG	United Nations Recommendations on the Transport of Dangerous Goods;
vPvB	Very Persistent and Very Bioaccumulative