

Creation Date 01-May-2012

Revision Date 11-Feb-2024

Revision Number 5

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product Description:	<b>4-tert-Butylcatechol</b>
Cat No. :	<b>A14599</b>
Synonyms	4-tert-Butylpyrocatechol; 4-(1,1-Dimethylethyl)-1,2-benzenediol; TBC
CAS No	98-29-3
EC No	202-653-9
Molecular Formula	C <sub>10</sub> H <sub>14</sub> O <sub>2</sub>
REACH registration number	-

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

Recommended Use	Laboratory chemicals.
Sector of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Product category	PC21 - Laboratory chemicals
Process categories	PROC15 - Use as a laboratory reagent
Environmental release category	ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
Uses advised against	No Information available

### 1.3. Details of the supplier of the safety data sheet

#### Company

Thermo Fisher (Kandel) GmbH  
Erlenbachweg 2, 76870 Kandel, Germany  
Tel: +49 (0) 721 84007 280  
Fax: +49 (0) 721 84007 300

**Swiss distributor** - Fisher Scientific AG  
Neuhofstrasse 11, CH 4153 Reinach  
Tel: +41 (0) 56 618 41 11  
<https://www.fishersci.ch/ch/en/customer-help-support/forms/email-us.html>

#### E-mail address

begel.sdsdesk@thermofisher.com

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:  
Tox Info Suisse Emergency Number: **145 (24hr)**  
Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)  
Chemtrec (24h) Toll-Free: 0800 564 402  
Chemtrec Local: +41-43 508 20 11 (Zurich)

## SECTION 2: HAZARDS IDENTIFICATION

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## 2.1. Classification of the substance or mixture

### CLP Classification - Regulation (EC) No 1272/2008

#### Physical hazards

Based on available data, the classification criteria are not met

#### Health hazards

Acute oral toxicity  
Acute dermal toxicity  
Skin Corrosion/Irritation  
Serious Eye Damage/Eye Irritation  
Skin Sensitization  
Carcinogenicity

Category 4 (H302)  
Category 4 (H312)  
Category 1 B (H314)  
Category 1 (H318)  
Category 1 (H317)  
Category 1B (H350)

#### Environmental hazards

Acute aquatic toxicity  
Chronic aquatic toxicity

Category 1 (H400)  
Category 2 (H411)

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Danger

### **Hazard Statements**

H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H350 - May cause cancer  
H400 - Very toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects  
H302 + H312 - Harmful if swallowed or in contact with skin

### **Precautionary Statements**

P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor/physician

### **Additional EU labelling**

Restricted to professional users

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## 2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Toxic to terrestrial vertebrates

Contains a known or suspected endocrine disruptor

Contains a substance on the National Authorities Endocrine Disruptor Lists

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	98-29-3	202-653-9	<=100	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)
1,2-Benzenediol	120-80-9	EEC No. 204-427-5	<=0.5	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Muta. 2 (H341) Carc. 1B (H350)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	-	1	-

Component	ECHA (RAC) ATE (Oral)	ECHA (RAC) ATE (Dermal)	ECHA (RAC) ATE (Inhalation)
1,2-Benzenediol	ATE = 300 mg/kg bw	ATE = 600 mg/kg bw	-

ECHA (RAC) - Committee for Risk Assessment - European CHemicals Agency  
ATE - Acute Toxicity Estimate; mg/kg bw - milligrams per kilogram of body weight

REACH registration number	-
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Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.
Ingestion	Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison

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control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

## Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

## 4.2. Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. May cause allergic skin reaction. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

## 4.3. Indication of any immediate medical attention and special treatment needed

### Notes to Physician

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Suitable Extinguishing Media

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

#### Extinguishing media which must not be used for safety reasons

No information available.

### 5.2. Special hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Do not allow run-off from fire-fighting to enter drains or water courses.

#### Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Fumes, Thermal decomposition can lead to release of irritating gases and vapors.

### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

### 6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

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## 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

### 7.2. Conditions for safe storage, including any incompatibilities

Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere. Protect from moisture.

**Technical Rules for Hazardous Substances (TRGS) 510**  
**Storage Class (LGK) (Germany)**

Storage Class/LGK 6.1C

**Switzerland - Storage of hazardous substances**

Storage class - SC 6.1

<https://www.kvu.ch/de/themen/stoffe-und-produkte>

<https://www.kvu.ch/fr/themes/substances-et-produits>

<https://www.kvu.ch/it/temi/sostanze-e-prodotti>

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s): **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

Component	European Union	The United Kingdom	France	Belgium	Spain
1,2-Benzenediol		STEL: 15 ppm 15 min STEL: 69 mg/m <sup>3</sup> 15 min TWA: 5 ppm 8 hr TWA: 23 mg/m <sup>3</sup> 8 hr	TWA / VME: 5 ppm (8 heures). TWA / VME: 20 mg/m <sup>3</sup> (8 heures).	TWA: 5 ppm 8 uren TWA: 23 mg/m <sup>3</sup> 8 uren Huid	TWA / VLA-ED: 5 ppm (8 horas) TWA / VLA-ED: 23 mg/m <sup>3</sup> (8 horas) Piel

Component	Italy	Germany	Portugal	The Netherlands	Finland
1,2-Benzenediol			TWA: 5 ppm 8 horas Pele		TWA: 5 ppm 8 tunteina TWA: 22 mg/m <sup>3</sup> 8 tunteina STEL: 10 ppm 15 minuutteina STEL: 45 mg/m <sup>3</sup> 15 minuutteina Iho

Component	Austria	Denmark	Switzerland	Poland	Norway
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1,2-Benzenediol	Haut MAK-KZGW: 9 ppm 15 Minuten MAK-KZGW: 40 mg/m <sup>3</sup> 15 Minuten MAK-TMW: 4.5 ppm 8 Stunden MAK-TMW: 20 mg/m <sup>3</sup> 8 Stunden	TWA: 5 ppm 8 timer TWA: 20 mg/m <sup>3</sup> 8 timer STEL: 10 ppm 15 minutter STEL: 40 mg/m <sup>3</sup> 15 minutter	TWA: 5 ppm 8 Stunden TWA: 23 mg/m <sup>3</sup> 8 Stunden		TWA: 5 ppm 8 timer TWA: 20 mg/m <sup>3</sup> 8 timer STEL: 10 ppm 15 minutter. value calculated STEL: 30 mg/m <sup>3</sup> 15 minutter. value calculated
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Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
1,2-Benzenediol		kože TWA-GVI: 5 ppm 8 satima. TWA-GVI: 23 mg/m <sup>3</sup> 8 satima.	TWA: 5 ppm 8 hr. TWA: 20 mg/m <sup>3</sup> 8 hr. STEL: 15 ppm 15 min STEL: 60 mg/m <sup>3</sup> 15 min Skin		

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
1,2-Benzenediol	Nahk TWA: 5 ppm 8 tundides. TWA: 20 mg/m <sup>3</sup> 8 tundides. STEL: 10 ppm 15 minutites. STEL: 40 mg/m <sup>3</sup> 15 minutites.		skin - potential for cutaneous absorption TWA: 5 ppm TWA: 20 mg/m <sup>3</sup>		TWA: 5 ppm 8 klukkustundum. TWA: 20 mg/m <sup>3</sup> 8 klukkustundum. Ceiling: 10 ppm Ceiling: 40 mg/m <sup>3</sup>

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
1,2-Benzenediol		TWA: 5 ppm IPRD TWA: 20 mg/m <sup>3</sup> IPRD Oda STEL: 10 ppm STEL: 40 mg/m <sup>3</sup>			TWA: 10 mg/m <sup>3</sup> 8 ore STEL: 20 mg/m <sup>3</sup> 15 minute

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	Skin notation MAC: 2 mg/m <sup>3</sup>				
1,2-Benzenediol	Skin notation MAC: 0.5 mg/m <sup>3</sup>			Indicative STEL: 10 ppm 15 minuter Indicative STEL: 40 mg/m <sup>3</sup> 15 minuter TLV: 5 ppm 8 timmar. NGV TLV: 20 mg/m <sup>3</sup> 8 timmar. NGV Hud	

## Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

## Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

## Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

Workers; See table for values

Component	Acute effects local	Acute effects	Chronic effects local	Chronic effects
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	(Dermal)	systemic (Dermal)	(Dermal)	systemic (Dermal)
1,2-Benzenediol 120-80-9 ( ≤0.5 )		DNEL = 2.5mg/kg bw/day		

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
1,2-Benzenediol, 4-(1,1-dimethylethyl)- 98-29-3 ( ≤100 )				DNEL = 1.6mg/m <sup>3</sup>
1,2-Benzenediol 120-80-9 ( ≤0.5 )		DNEL = 85mg/m <sup>3</sup>		DNEL = 0.9mg/m <sup>3</sup>

## Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
1,2-Benzenediol, 4-(1,1-dimethylethyl)- 98-29-3 ( ≤100 )	PNEC = 1.2µg/L	PNEC = 6.9µg/kg sediment dw	PNEC = 1.2µg/L	PNEC = 0.16mg/L	PNEC = 0.68µg/kg soil dw
1,2-Benzenediol 120-80-9 ( ≤0.5 )	PNEC = 1.1µg/L	PNEC = 0.017mg/kg sediment dw	PNEC = 11µg/L	PNEC = 1.958mg/L	PNEC = 0.0027mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air
1,2-Benzenediol, 4-(1,1-dimethylethyl)- 98-29-3 ( ≤100 )	PNEC = 0.12µg/L	PNEC = 0.69µg/kg sediment dw			
1,2-Benzenediol 120-80-9 ( ≤0.5 )	PNEC = 0.11µg/L	PNEC = 0.0017mg/kg sediment dw			

## 8.2. Exposure controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### Eye Protection

Goggles (European standard - EN 166)

#### Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers	-	EN 374	(minimum requirement)
Butyl rubber	recommendations			
Nitrile rubber				
Neoprene				
PVC				

#### Skin and body protection

Long sleeved clothing.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

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<b>Respiratory Protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
<b>Large scale/emergency use</b>	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced <b>Recommended Filter type:</b> Particulates filter conforming to EN 143
<b>Small scale/Laboratory use</b>	Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. <b>Recommended half mask:-</b> Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted
<b>Environmental exposure controls</b>	Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Physical State</b>	Solid	
<b>Appearance</b>	Off-white	
<b>Odor</b>	aromatic	
<b>Odor Threshold</b>	No data available	
<b>Melting Point/Range</b>	53 - 56 °C / 127.4 - 132.8 °F	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	285 °C / 545 °F	@ 760 mmHg
<b>Flammability (liquid)</b>	Not applicable	Solid
<b>Flammability (solid,gas)</b>	No information available	
<b>Explosion Limits</b>	No data available	
<b>Flash Point</b>	129 °C / 264.2 °F	<b>Method -</b> No information available
<b>Autoignition Temperature</b>	No data available	
<b>Decomposition Temperature</b>	No data available	
<b>pH</b>	No information available	
<b>Viscosity</b>	Not applicable	Solid
<b>Water Solubility</b>	0.2% (25°C)	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		
<b>Component</b>	<b>log Pow</b>	
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	1.98	
1,2-Benzenediol	1.01	
<b>Vapor Pressure</b>	No data available	
<b>Density / Specific Gravity</b>	No data available	
<b>Bulk Density</b>	No data available	
<b>Vapor Density</b>	Not applicable	Solid
<b>Particle characteristics</b>	No data available	

### 9.2. Other information

<b>Molecular Formula</b>	C10 H14 O2
<b>Molecular Weight</b>	166.22
<b>Evaporation Rate</b>	Not applicable - Solid



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## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Hygroscopic.

### 10.3. Possibility of hazardous reactions

#### Hazardous Polymerization Hazardous Reactions

Hazardous polymerization does not occur.  
None under normal processing.

### 10.4. Conditions to avoid

Incompatible products. Excess heat. Exposure to moist air or water.

### 10.5. Incompatible materials

Strong oxidizing agents. Alkaline. Metals.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Fumes. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Product Information

#### (a) acute toxicity;

Oral

Category 4

Dermal

Category 4

Inhalation

Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	815 mg/kg ( Rat )	1331 mg/kg ( Rat )	-
1,2-Benzenediol	ECHA (RAC) ATE = 300 mg/kg LD50 = 260 mg/kg ( Rat )	ECHA (RAC) ATE = 600 mg/kg LD50 = 800 mg/kg (Rabbit)	-

Component	ECHA (RAC) ATE (Oral)	ECHA (RAC) ATE (Dermal)	ECHA (RAC) ATE (Inhalation)
1,2-Benzenediol	ATE = 300 mg/kg bw	ATE = 600 mg/kg bw	-

ECHA (RAC) - Committee for Risk Assessment - European Chemicals Agency  
ATE - Acute Toxicity Estimate; mg/kg bw - milligrams per kilogram of body weight

#### (b) skin corrosion/irritation;

Category 1 B

#### (c) serious eye damage/irritation;

Category 1

#### (d) respiratory or skin sensitization;

Respiratory

No data available

Skin

Category 1

No information available

#### (e) germ cell mutagenicity;

No data available

#### (f) carcinogenicity;

Category 1B

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The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	EU	UK	Germany	IARC
1,2-Benzenediol	Carc Cat. 1B			Group 2B

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; Not applicable  
Solid

Other Adverse Effects The toxicological properties have not been fully investigated.

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

## 11.2. Information on other hazards

**Endocrine Disrupting Properties**  
**Assess endocrine disrupting properties for human health**

Contains a substance on the National Authorities Endocrine Disruptor Lists

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecotoxicity effects**

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	LC50 = 0.12 mg/L 96h	EC50=0.48 mg/L 48h	
1,2-Benzenediol	LC50: = 3.5 mg/L, 96h flow-through (Pimephales promelas) LC50: = 8.9 mg/L, 96h flow-through (Oncorhynchus mykiss)	EC50: = 1.66 mg/L, 48h (Daphnia magna)	

Component	Microtox	M-Factor
1,2-Benzenediol, 4-(1,1-dimethylethyl)-		1
1,2-Benzenediol	EC50 = 174 mg/L 210 min EC50 = 29.7 mg/L 30 min EC50 = 32.0 mg/L 5 min EC50 = 620 mg/L 48 h	

**12.2. Persistence and degradability** Biodegradability

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**Persistence  
Degradation in sewage  
treatment plant**

Persistence is unlikely.  
Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**12.3. Bioaccumulative potential**

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	1.98	No data available
1,2-Benzenediol	1.01	No data available

**12.4. Mobility in soil**

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

**12.5. Results of PBT and vPvB  
assessment**

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

**12.6. Endocrine disrupting  
properties**

**Endocrine Disruptor Information  
Assess endocrine disrupting  
properties for the environment**

This product does not contain any known or suspected endocrine disruptors.  
Contains a substance on the National Authorities Endocrine Disruptor Lists.

**12.7. Other adverse effects  
Persistent Organic Pollutant  
Ozone Depletion Potential**

This product does not contain any known or suspected substance.  
This product does not contain any known or suspected substance.

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Waste from Residues/Unused  
Products**

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations. Should not be released into the environment.

**Contaminated Packaging**

Dispose of this container to hazardous or special waste collection point.

**European Waste Catalogue (EWC)**

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

**Other Information**

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

**Switzerland - Waste Ordinance**

Disposal should be in accordance with applicable regional, national and local laws and regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) SR 814.600  
<https://www.fedlex.admin.ch/eli/cc/2015/891/en>

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO**

**14.1. UN number**

UN3261

**14.2. UN proper shipping name  
Technical Shipping Name**

Corrosive solid, acidic, organic, n.o.s.  
4-tert-Butylcatechol

**14.3. Transport hazard class(es)**

8

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**14.4. Packing group** II

## ADR

**14.1. UN number** UN3261  
**14.2. UN proper shipping name** Corrosive solid, acidic, organic, n.o.s.  
**Technical Shipping Name** 4-tert-Butylcatechol  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** II

## IATA

**14.1. UN number** UN3261  
**14.2. UN proper shipping name** Corrosive solid, acidic, organic, n.o.s.  
**Technical Shipping Name** 4-tert-Butylcatechol  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** II

**14.5. Environmental hazards** Dangerous for the environment  
Product is a marine pollutant according to the criteria set by IMDG/IMO

**14.6. Special precautions for user** No special precautions required.

**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

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

#### International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	98-29-3	202-653-9	-	-	X	X	KE-11368	X	X
1,2-Benzenediol	120-80-9	204-427-5	-	-	X	X	KE-02556	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	98-29-3	X	ACTIVE	X	-	X	X	X
1,2-Benzenediol	120-80-9	X	ACTIVE	X	-	X	X	X

**Legend:** X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	98-29-3	-	Use restricted. See item 75. (see link for restriction details)	-

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1,2-Benzenediol	120-80-9	-	Use restricted. See item 28. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-
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## REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

## Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	98-29-3	Not applicable	Not applicable
1,2-Benzenediol	120-80-9	Not applicable	Not applicable

## Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

## Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Dir 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations

## National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

## WGK Classification

See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
1,2-Benzenediol, 4-(1,1-dimethylethyl)-	WGK3	
1,2-Benzenediol	WGK2	

## Swiss Regulations

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
1,2-Benzenediol, 4-(1,1-dimethylethyl)- 98-29-3 ( <=100 )	Prohibited and Restricted Substances		
1,2-Benzenediol 120-80-9 ( <=0.5 )	Prohibited and Restricted Substances		

## 15.2. Chemical safety assessment

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A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

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

H302 - Harmful if swallowed  
H312 - Harmful in contact with skin  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H350 - May cause cancer  
H400 - Very toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects  
H301 - Toxic if swallowed  
H311 - Toxic in contact with skin  
H315 - Causes skin irritation  
H332 - Harmful if inhaled  
H341 - Suspected of causing genetic defects

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (volatile organic compound)

### Training Advice

Chemical incident response training.

### Prepared By

Health, Safety and Environmental Department

### Creation Date

01-May-2012

### Revision Date

11-Feb-2024

### Revision Summary

New emergency telephone response service provider.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 .**

**For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2,**

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## Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

## End of Safety Data Sheet