

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : 2-sec-Butylphenol

Product Number : B99006  
Brand : Aldrich

CAS-No. : 89-72-5

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

Identified uses : Laboratory chemicals, Synthesis of substances

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

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052

#### 1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302  
Skin corrosion (Category 1C), H314  
Serious eye damage (Category 1), H318  
Acute aquatic toxicity (Category 2), H401

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

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H302 : Harmful if swallowed.  
H314 : Causes severe skin burns and eye damage.  
H401 : Toxic to aquatic life.

Precautionary statement(s)

P264 : Wash skin thoroughly after handling.  
P270 : Do not eat, drink or smoke when using this product.  
P273 : Avoid release to the environment.  
P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P312 : IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P301 + P330 + P331 P303 + P361 + P353	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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/doctor.
P321	Specific treatment (see supplemental first aid instructions on this label).
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Formula	: C <sub>10</sub> H <sub>14</sub> O
Molecular weight	: 150.22 g/mol
CAS-No.	: 89-72-5
EC-No.	: 201-933-8

#### Hazardous components

Component	Classification	Concentration
<b>2-sec-Butylphenol</b>	Acute Tox. 4; Skin Corr. 1C; Eye Dam. 1; Aquatic Acute 2; H302, H314, H401	<= 100 %

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

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

##### General advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

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

### 5. FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture**

No data available

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

No data available

**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

**6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**6.3 Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas. Air sensitive.

**7.3 Specific end use(s)**

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

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****Components with workplace control parameters**

Component	CAS-No.	Value	Control parameters	Basis
2-sec-Butylphenol	89-72-5	TWA	5.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Skin irritation Danger of cutaneous absorption		
		TWA	5 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation Skin irritation Danger of cutaneous absorption		
		TWA	5.000000 ppm 30.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		

		TWA	5 ppm 30 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		PEL	5 ppm 30 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

## 8.2 Exposure controls

### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal protective equipment

#### Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |                    |   |
|--------------------|---|
| a) Appearance      | Form: clear, liquid<br>Colour: light yellow |
| b) Odour           | aromatic                                    |
| c) Odour Threshold | No data available                           |

d) pH	No data available
e) Melting point/freezing point	Melting point/range: 12 °C (54 °F) - lit.
f) Initial boiling point and boiling range	226 - 228 °C (439 - 442 °F) - lit.
g) Flash point	112 °C (234 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	0.03 hPa (0.02 mmHg) at 20 °C (68 °F) - OECD Test Guideline 104
l) Vapour density	No data available
m) Relative density	0.982 g/cm <sup>3</sup> at 25 °C (77 °F) - lit.
n) Water solubility	1.46 g/l at 20.1 °C (68.2 °F) - OECD Test Guideline 105
o) Partition coefficient: n-octanol/water	log Pow: 3 at 25 °C (77 °F) - OECD Test Guideline 117
p) Auto-ignition temperature	320 °C (608 °F) at 1,012.5 - 1,022.4 hPa (759.4 - 766.9 mmHg)
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	Not explosive
t) Oxidizing properties	No data available

## 9.2 Other safety information

Surface tension	47.4 mN/m at 20 °C (68 °F)
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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Air

### 10.5 Incompatible materials

Bases, Acid chlorides, Acid anhydrides, Oxidizing agents, Brass, Copper  
Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - > 200 - < 2,000 mg/kg  
(OECD Test Guideline 401)

LC50 Inhalation - Rat - 4 h - > 290 ppm

LD50 Dermal - Rabbit - 5,560 mg/kg

Remarks: Prolonged skin contact may cause skin irritation and/or dermatitis.

LD50 Intraperitoneal - Mouse - 63 mg/kg

#### 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.

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

Ames test

S. typhimurium

Result: negative

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### Reproductive toxicity

No data available

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

#### Additional Information

RTECS: SJ8920000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Headache, Nausea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish

semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 1 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 3.7 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata - 10 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria Respiration inhibition EC50 - Sludge Treatment - > 10 mg/l - 3 h (OECD Test Guideline 209)

## 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d  
Result: 63 % - Readily biodegradable (OECD Test Guideline 301D)

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Toxic to aquatic life.

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 3145 Class: 8 Packing group: III  
Proper shipping name: Alkylphenols, liquid, n.o.s.  
Reportable Quantity (RQ):

Poison Inhalation Hazard: No

### IMDG

UN number: 3145 Class: 8 Packing group: III EMS-No: F-A, S-B  
Proper shipping name: ALKYLPHENOLS, LIQUID, N.O.S.

### IATA

UN number: 3145 Class: 8 Packing group: III  
Proper shipping name: Alkylphenols, liquid, n.o.s.

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## 15. REGULATORY INFORMATION

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

2-sec-Butylphenol

CAS-No.  
89-72-5Revision Date  
1994-04-01**Pennsylvania Right To Know Components**

2-sec-Butylphenol

CAS-No.  
89-72-5Revision Date  
1994-04-01**New Jersey Right To Know Components**

2-sec-Butylphenol

CAS-No.  
89-72-5Revision Date  
1994-04-01**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Eye Dam.	Serious eye damage
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H401	Toxic to aquatic life.

**HMIS Rating**

Health hazard:	1
Chronic Health Hazard:	
Flammability:	1
Physical Hazard	0

**NFPA Rating**

Health hazard:	2
Fire Hazard:	1
Reactivity Hazard:	0

**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

Version: 4.6

Revision Date: 05/27/2016

Print Date: 11/10/2018