

## Material Safety Data Sheet

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Version 1.5

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

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1 - Product and Company Information

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Product Name BENZYL ALCOHOL, ANHYDROUS, 99.8%  
Product Number 305197

Company Sigma-Aldrich Pty, Ltd  
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2 - Composition/Information on Ingredients

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Product Name	CAS #	EC no	Annex I Index Number
BENZYL ALCOHOL	100-51-6	202-859-9	603-057-00-5

Formula C7H8O

Molecular Weight 108.14 AMU

Synonyms Benzal alcohol \* Benzenecarbinol \*  
Benzenemethanol \* Benzoyl alcohol \*  
Hydroxytoluene \* alpha-Hydroxytoluene \*  
Methanol, phenyl- \* NCI-C06111 \* Phenolcarbinol  
\* Phenylcarbinol \* Phenylmethanol \* Phenylmethyl  
alcohol \* alpha-Toluenol

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3 - Hazards Identification

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SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT  
Harmful by inhalation and if swallowed.

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4 - First Aid Measures

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## AFTER INHALATION

If inhaled, remove to fresh air. If breathing becomes difficult,  
call a physician.

## AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious  
amounts of water.

## AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of  
water for at least 15 minutes. Assure adequate flushing by  
separating the eyelids with fingers. Call a physician.

## AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

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## 5 - Fire Fighting Measures

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### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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## 6 - Accidental Release Measures

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PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL  
Evacuate area.

### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

### METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

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## 7 - Handling and Storage

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### HANDLING

Directions for Safe Handling: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

### STORAGE

Conditions of Storage: Keep tightly closed. Handle and store under nitrogen. Store in a cool dry place.

SPECIAL REQUIREMENTS: Handle and store under inert gas.  
Hygroscopic.

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## 8 - Exposure Controls / Personal Protection

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### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

### EXPOSURE LIMITS

Country	Source	Type	Value
Poland		NDS	240 mg/m3
Poland		NDSch	-
Poland		NDSP	

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.  
Hand Protection: Compatible chemical-resistant gloves.  
Eye Protection: Chemical safety goggles.

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## 9 - Physical and Chemical Properties

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Appearance	Physical State: Clear liquid Color: Colorless	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	90 - 93 °C	10 mmHg
MP/MP Range	-16 °C	
Flash Point	96 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	436 °C	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	3.75 mmHg	77 °C
SG/Density	1.044 g/cm3	
Partition Coefficient	Log Kow: 1.1	
Viscosity	0.005 Pas	25 °C
Vapor Density	3.7 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	39 mN/m	20 °C
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water: 33 mg/ml H2O, 20°C clear, colorless Other Solvents: SOLUBLE IN ETHANOL, ETHER	

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## 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Conditions of Instability: Hygroscopic.

Conditions to Avoid: A mixture of benzyl alcohol and 58% sulfuric acid decomposed violently when heated to 180°C. Benzyl alcohol containing 1.4% hydrogen bromide and 1.1% of an iron(II) salt polymerized exothermally when heated above 100°C.

Materials to Avoid: Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## 11 - Toxicological Information

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RTECS NUMBER: DN3150000

### ACUTE TOXICITY

LD50  
Oral  
Rat  
1230 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).  
Behavioral:Excitement. Behavioral:Coma.

LD50  
Intraperitoneal  
Rat  
400 MG/KG

LD50  
Intravenous  
Rat  
53 MG/KG  
Remarks: Lungs, Thorax, or Respiration:Dyspnea.

LD50  
Intraarterial  
Rat  
441 MG/KG  
Remarks: Lungs, Thorax, or Respiration:Chronic pulmonary edema.  
Lungs, Thorax, or Respiration:Dyspnea.

LD50  
Oral  
Mouse  
1360 mg/kg

LD50  
Intraperitoneal  
Mouse  
650 MG/KG  
Remarks: Behavioral:Altered sleep time (including change in  
righting reflex). Behavioral:Somnolence (general depressed  
activity). Lungs, Thorax, or Respiration:Dyspnea.

LD50  
Intravenous  
Mouse  
324 MG/KG

LD50  
Oral  
Rabbit  
1040 mg/kg  
Remarks: Behavioral:Somnolence (general depressed activity).

LD50  
Skin  
Rabbit  
2000 mg/kg

LD50  
Oral  
Guinea pig  
2500 mg/kg

LD50  
Oral  
Bird (wild)  
100 mg/kg

#### IRRITATION DATA

Skin  
Man  
16 mg  
48H  
Remarks: Mild irritation effect

Skin  
Rabbit  
100 mg  
24H  
Remarks: Moderate irritation effect

Skin  
Pig  
100 %  
Remarks: Moderate irritation effect

#### SIGNS AND SYMPTOMS OF EXPOSURE

Can cause CNS depression.

#### ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: May cause eye irritation.  
Inhalation: Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.  
Ingestion: Harmful if swallowed.

#### TARGET ORGAN INFORMATION

Central nervous system.

#### CHRONIC EXPOSURE - MUTAGEN

Rat  
10 MMOL/L  
Cell Type: liver  
DNA damage

Mouse  
250 MG/L (+S9)  
Cell Type: lymphocyte  
Mutation in microorganisms

Hamster  
4 UG/L  
Cell Type: ovary  
Cytogenetic analysis

#### CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Mouse  
Dose: 6 GM/KG  
Route of Application: Oral  
Exposure Time: (6-13D PREG)  
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain).

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## 12 - Ecological Information

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#### ECOTOXICOLOGICAL EFFECTS

Test Type: EC50 Daphnia

Species: Daphnia magna  
Time: 24 h  
Value: 55 mg/l

Test Type: LC50 Fish  
Species: Lepomis macrochirus (Bluegill)  
Time: 96 h  
Value: 10 mg/l

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### 13 - Disposal Considerations

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#### SUBSTANCE DISPOSAL

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. Observe all federal, state, and local environmental regulations.

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### 14 - Transport Information

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#### RID/ADR

Non-hazardous for road transport.

#### IMDG

Non-hazardous for sea transport.

#### IATA

Non-hazardous for air transport.

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### 15 - Regulatory Information

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#### CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 603-057-00-5

INDICATION OF DANGER: Xn

Harmful.

R-PHRASES: 20/22

Harmful by inhalation and if swallowed.

S-PHRASES: 26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

#### COUNTRY SPECIFIC INFORMATION

##### Germany

WGK: 1

##### SWITZERLAND

SWISS POISON CLASS: 4

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### 16 - Other Information

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#### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.  
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