

## MATERIAL SAFETY DATA SHEET

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Version 1.6

## Section 1 - Product and Company Information

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

Company Sigma-Aldrich  
Street Address 3050 Spruce Street  
City, State, Zip, Country SAINT LOUIS MO 63103 US  
Technical Phone: 314 771 5765  
Emergency Phone: 414 273 3850 Ext. 5996  
Fax: 800 325 5052

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
BENZYL ALCOHOL	100-51-6	No

Formula C7H8O  
Synonyms Benzal alcohol \* Benzenecarbinol \*  
Benzenemethanol \* Benzoyl alcohol \*  
Hydroxytoluene \* alpha-Hydroxytoluene \* Methanol,  
phenyl- \* NCI-C06111 \* Phenolcarbinol \*  
Phenylcarbinol \* Phenylmethanol \* Phenylmethyl  
alcohol \* alpha-Toluenol  
RTECS Number: DN3150000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Harmful.

Harmful by inhalation and if swallowed. Irritating to skin.

Target organ(s): Central nervous system.

## HMIS RATING

HEALTH: 2\*

FLAMMABILITY: 1

REACTIVITY: 1

## NFPA RATING

HEALTH: 2

FLAMMABILITY: 1

REACTIVITY: 1

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

## ORAL EXPOSURE

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

#### INHALATION EXPOSURE

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

#### DERMAL EXPOSURE

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

#### EYE EXPOSURE

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.

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### Section 5 - Fire Fighting Measures

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#### FLASH POINT

204.8 °F 96 °C Method: closed cup

#### AUTOIGNITION TEMP

436 °C

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

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

#### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Emits toxic fumes under fire conditions.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE 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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### Section 7 - Handling and Storage

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#### HANDLING

User Exposure: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Suitable: 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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### Section 8 - Exposure Controls / PPE

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ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

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

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

EXPOSURE LIMITS

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

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Section 9 - Physical/Chemical Properties

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Appearance	Physical State: Clear liquid Color: Colorless	
Property	Value	At Temperature or Pressure
Molecular Weight	108.14 AMU	
pH	N/A	
BP/BP Range	90 - 93 °C	10 mmHg
MP/MP Range	-16 °C	
Freezing Point	N/A	
Vapor Pressure	3.75 mmHg	77 °C
Vapor Density	3.7 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	1.044 g/cm3	
Bulk Density	N/A	
Odor Threshold	5.5 ppm	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	0.005 Pas	25 °C
Surface Tension	39 mN/m	20 °C
Partition Coefficient	Log Kow: 1.1	
Decomposition Temp.	N/A	
Flash Point	204.8 °F 96 °C	Method: closed cup
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	436 °C	
Refractive Index	1.54	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water: 33 mg/ml H2O, 20°C clear, colorless Other Solvents: SOLUBLE IN ETHANOL, ETHER	

N/A = not available

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Section 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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### Section 11 - Toxicological Information

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#### 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(S) OR SYSTEM(S)

Central nervous system.

#### SIGNS AND SYMPTOMS OF EXPOSURE

Can cause CNS depression.

#### TOXICITY DATA

Oral  
Rat  
1230 mg/kg  
LD50  
Remarks: Behavioral:Somnolence (general depressed activity).  
Behavioral:Excitement. Behavioral:Coma.

Intraperitoneal  
Rat  
400 MG/KG  
LD50

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

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

Oral  
Mouse  
1360 mg/kg  
LD50

Intraperitoneal

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

Intravenous  
Mouse  
324 MG/KG  
LD50

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

Skin  
Rabbit  
2000 mg/kg  
LD50

Oral  
Guinea pig  
2500 mg/kg  
LD50

Oral  
Bird (wild)  
100 mg/kg  
LD50

#### 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

#### NTP CARCINOGEN LIST

Rating: No evidence.  
Species: Mouse/rat  
Route: Gavage

#### CHRONIC EXPOSURE - MUTAGEN

Species: Rat  
Dose: 10 MMOL/L

Cell Type: liver  
Mutation test: DNA damage

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

Species: Hamster  
Dose: 4 UG/L  
Cell Type: ovary  
Mutation test: Cytogenetic analysis

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#### 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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#### Section 12 - Ecological Information

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##### ACUTE ECOTOXICITY TESTS

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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#### Section 13 - Disposal Considerations

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##### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

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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#### Section 14 - Transport Information

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##### DOT

Proper Shipping Name: Aviation Regulated Liquid, N.O.S.  
UN#: 3334  
Class: 9  
Packing Group: Packing Group III  
Hazard Label: Class 9  
PIH: Not PIH

##### IATA

Proper Shipping Name: Aviation Regulated Liquid, N.O.S.  
IATA UN Number: 3334  
Hazard Class: 9

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#### Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION

Symbol of Danger: Xn

Indication of Danger: Harmful.

R: 20/22

Risk Statements: Harmful by inhalation and if swallowed.

S: 26

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

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.

Risk Statements: Harmful by inhalation and if swallowed.

Irritating to skin.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

US Statements: Target organ(s): Central nervous system.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

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Section 16 - Other Information

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DISCLAIMER

For R&D use only. Not for drug, household or other uses.

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. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.