

## MATERIAL SAFETY DATA SHEET

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Version 1.6

## Section 1 - Product and Company Information

Product Name BENZYL ALCOHOL, 99+%, A.C.S.  
REAGENT  
Product Number 402834  
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.

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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/cm <sup>3</sup>	
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 H <sub>2</sub> O, 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

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##### 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

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