

MATERIAL SAFETY DATA SHEET

Date Printed: 03/14/2005

Date Updated: 03/10/2005

Version 1.9

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.

Section 5 - Fire Fighting Measures

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.

Section 6 - Accidental Release Measures

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.

Section 7 - Handling and Storage

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.

Section 8 - Exposure Controls / PPE

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	

Section 9 - Physical/Chemical Properties

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

Section 10 - Stability and Reactivity

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

Section 11 - Toxicological Information

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

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).

Section 12 - Ecological Information

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

Section 13 - Disposal Considerations

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.

Section 14 - Transport Information

DOT

Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

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

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

Section 16 - Other Information

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 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.