



SIGMA-ALDRICH

Material Safety Data Sheet

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Version 1.90

Section 1 - Product and Company Information

Product Name Benzyl alcohol, ReagentPlus™, ≥99%
Product Number T08006
Brand Aldrich Chemical

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

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
BENZYL ALCOHOL	100-51-6	No	202-859-9	603-057-00-5

Formula C7H8O
Synonyms Benzal alcohol, Benzenecarbinol, Benzenemethanol, Benzoyl alcohol, Hydroxytoluene, alpha-Hydroxytoluene, Methanol, phenyl-, NCI-C06111, Phenolcarbinol, Phenylcarbinol, Phenylmethanol, Phenylmethyl alcohol, alpha-Toluenol

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.

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

Autoignition Temp: 436 °C

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	Type	Value
Poland	NDS	240 mg/m3
Poland	NDSCh	-
Poland	NDSP	-

Section 9 - Physical/Chemical Properties

Appearance
Physical State: Clear liquid
Color: Colorless

Molecular Weight: 108.14 AMU

Property **Value** **At Temperature or Pressure**

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	39.0 mN/m	20 °C
Partition Coefficient	Log Kow: 1.10	
Decomposition Temp.	N/A	
Flash Point °F	204.8 °F	Method: closed cup
Flash Point °C	96 °C	Method: closed cup
Explosion Limits	N/A	

Flammability N/A
Autoignition Temp 436 °C
Refractive Index 1.54

Solubility
Solubility in Water: 33 mg/ml H₂O, 20°C, clear, colorless
Other Solvents: SOLUBLE IN ETHANOL, ETHER, ACETONE, BENZENE.

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.

RTECS Number: DN3150000

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

<u>Rating</u>	<u>Species</u>	<u>Route</u>
No evidence.	Mouse/rat	Gavage

Chronic Exposure - Mutagen

<u>Species</u>	<u>Dose</u>	<u>Cell Type</u>	<u>Mutation test</u>
Rat	10 MMOL/L	liver	DNA damage
Mouse	250 MG/L (+S9)	lymphocyte	Mutation in microorganisms
Hamster	4 UG/L	ovary	Cytogenetic analysis

Chronic Exposure - Reproductive Hazard

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
Mouse	6 GM/KG	Oral	(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: Value:
24.0 h 55 mg/l

Test Type
LC50 Fish

Species
Lepomis macrochirus (Bluegill)

Time: Value:
96.0 h 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.
Risk Statements R: 20/22
Harmful by inhalation and if swallowed.
Safety Statements S: 26
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.