



Material Safety Data Sheet p-Dimethylaminobenzaldehyde Solution

Section 1 - Chemical Product and Company Identification

MSDS Name:

p-Dimethylaminobenzaldehyde Solution

Catalog Numbers:

LC13590

Synonyms:

Hydrazine Reagent

Company Identification:

LabChem Inc

200 William Pitt Way

Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
67-56-1	Methyl alcohol	90.9
7647-01-0	Hydrochloric acid	9.1
100-10-7	p-Dimethylaminobenzaldehyde	0.18

Section 3 - Hazards Identification

Emergency Overview

Appearance: Clear, yellow solution

Danger! Flammable. Corrosive. Causes eye and skin irritation and burns. May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous. Causes digestive tract irritation and burns with nausea, vomiting, and diarrhea. May cause dermatitis.

Target Organs: Nervous system, optic nerve, eyes, skin, respiratory system, gastrointestinal system, teeth.

Potential Health Effects

Eye:

Causes severe irritation or burns. May cause painful sensitization to light. Inhalation, ingestion, or skin absorption of methanol can cause significant disturbances in vision, including blindness.

Skin:

Causes skin irritation or burns. May be absorbed through the skin in harmful amounts, producing systemic effects that include visual disturbances.



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Ingestion:

May be fatal or cause blindness if swallowed. Causes digestive tract burns with abdominal pain, vomiting, and diarrhea. Causes central nervous system depression with headache, dizziness, drowsiness, and nausea, followed by collapse, unconsciousness, coma, and possible death due to respiratory failure.

Inhalation:

Causes respiratory tract irritation. Inhalation of methanol causes central nervous system depression with nausea, headache, vomiting, dizziness, and incoordination, followed by a period with no obvious symptoms (8-24 hours). The latent period is followed by metabolic acidosis and severe visual effects including blurred, double, or snowy vision, or blindness, which may be permanent.

Chronic:

Prolonged or repeated skin contact may cause defatting and dermatitis. May cause liver and kidney damage. May cause liver abnormalities, kidney damage, eye damage (blindness or blurred vision), lung, spleen, brain and central nervous system damage, and mutagenic and reproductive effects.

Section 4 - First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid at once.

Skin:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid at once. Wash clothing before reuse.

Ingestion:

Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid at once.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid at once. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Effects may be delayed. Ethanol may inhibit methanol metabolism.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Move container if possible, cool with fog or spray. Avoid breathing vapors, use approved respirator if necessary. Vapors are heavier than air and may travel considerable distance and flash back from source of ignition. Dangerous fire hazard when exposed to heat or flame. Fire and explosion hazard by reaction with strong oxidizers. Water streams may spread fire.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

851°F (455°C)



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Flash Point:

54°F (12°C)

NFPA Rating:

CAS# 67-56-1: Health-1, Flammability-3, Instability-0

CAS# 7647-01-0: Health-3, Flammability-0, Instability-1

CAS# 100-10-7: Health-1, Flammability-1, Instability-1

Explosion Limits:

Lower: 6% Upper: 31%

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Shut off ignition sources; avoid breathing vapors. Isolate and ventilate spill area. Area may be washed down with water.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Avoid breathing vapor, mist, or gas. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Avoid use in confined spaces.

Storage:

Keep away from heat, sparks, and flame. Protect from heat and incompatibles. Store capped as a flammable liquid in safety cabinet or vault that is ventilated. Do not store in metal containers.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Methyl alcohol	200 ppm TWA; 260 mg/m ³ TWA	200 ppm TWA; 260 mg/m ³ TWA; 6000 ppm IDLH	200 ppm TWA; 250 ppm STEL
Hydrochloric acid	2 ppm Ceiling	50 ppm IDLH	5 ppm Ceiling; 7 mg/m ³ Ceiling
p-Dimethylamino-benzaldehyde	none listed	none listed	none listed

OSHA Vacated PELs:Methyl alcohol: 200 ppm TWA; 260 mg/m³ TWA



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Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	Yellow
Odor:	Alcohol-like
pH:	Acidic
Vapor Pressure:	128 mm Hg @ 20°C
Vapor Density:	1.1 (air = 1)
Evaporation Rate:	5.2 (ether = 1)
Viscosity:	0.55 cP @ 20°C
Boiling Point:	147°F (64°C)
Freezing/Melting Point:	-144°F (-98°C)
Decomposition Temperature:	Not available
Solubility in water:	Soluble
Specific Gravity/Density:	Not available
Molecular Formula:	Not applicable
Molecular Weight:	Not applicable

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures. May turn pink on exposure to light.

Conditions to Avoid:

Incompatible materials, light, excess heat, ignition sources, confined spaces.

Incompatibilities with Other Materials:

Oxidizing agents, reducing agents, alkali metals, powdered metals, amines, epoxides, cyanides, sulfides, phosphides.

Hazardous Decomposition Products:

Hydrogen chloride, oxides of carbon, formaldehyde, chlorine, hydrogen gas, nitrogen oxides.

Hazardous Polymerization:

Has not been reported.



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Section 11 - Toxicological Information

RTECS:

CAS# 67-56-1: PC1400000.

CAS# 7647-01-0: MW4025000, MW4031000.

CAS# 100-10-7: CU5775000.

LD50/LC50:

CAS# 67-56-1:

Inhalation, rat: LC50 = 64000 ppm/4H

Oral, mouse: LD50 = 7300 mg/kg

Oral, rabbit: LD50 = 14200 mg/kg

Oral, rat: LD50 = 5600 mg/kg

Skin, rabbit: LD50 = 15800 mg/kg

Draize test, rabbit, eye: 40 mg Moderate

Draize test, rabbit, skin: 20 mg/24H Moderate

CAS# 7647-01-0:

Inhalation, mouse: LC50 = 1108 ppm/1H

Inhalation, rat: LC50 = 3124 ppm/1H

Oral, rabbit: LD50 = 900 mg/kg.

CAS# 100-10-7:

Oral, mouse: LD50 = 800 mg/kg

Carcinogenicity:

CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7647-01-0: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 100-10-7: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

In animal experiments, methanol has caused fetotoxic or teratogenic effects without maternal toxicity. Developmental effects were seen in rats exposed to hydrochloric acid at exposures that also caused toxic effects in the mothers.

Reproductive:

See actual entry in RTECS for complete information.

Mutagenicity:

See actual entry in RTECS for complete information.

Neurotoxicity:

ACGIH cites neuropathy, vision and central nervous system effects under TLV basis.

Section 12 - Ecological Information

Ecotoxicity:

Fish: Fathead Minnow: 29.4 g/L; 96 Hr; LC50 (unspecified). Fish: Goldfish: 250 ppm; 11 Hr; resulted in death. Fish: Rainbow trout: 8000 mg/L; 48 Hr; LC50 (unspecified). Fish: Rainbow trout: LC50 = 13-68 mg/L; 96 Hr.; 12 degrees C. Fish: Fathead Minnow: LC50 = 29400 mg/L; 96 Hr.; 25 degrees C, pH 7.63. Fish: Rainbow trout: LC50 = 8000 mg/L; 48 Hr.; Unspecified.



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Bacteria: Phytobacterium phosphoreum: EC50 = 51,000-320,000 mg/L; 30 minutes; Microtox test
No data available.

Environmental:

Dangerous to aquatic life in high concentrations. Aquatic toxicity rating: TLM 96>1000 ppm. May be dangerous if it enters water intakes. Methyl alcohol is expected to biodegrade in soil and water very rapidly. This product will show high soil mobility and will be degraded from the ambient atmosphere by the reaction with photochemically produced hydroxyl radicals with an estimated half-life of 17.8 days. Bioconcentration factor for fish (golden ide) < 10. Based on a log Kow of -0.77, the BCF value for methanol can be estimated to be 0.2.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Flammable liquids, corrosive, n.o.s. (Methanol, hydrochloric acid)
Hazard Class: 3
UN Number: UN2924
Packing Group: PG II

Section 15 - Regulatory Information

US Federal

TSCA:

CAS# 67-56-1 is listed on the TSCA Inventory.
CAS# 7647-01-0 is listed on the TSCA Inventory.
CAS# 100-10-7 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):

CAS# 67-56-1: final RQ = 5000 pounds (2270 kg)
CAS# 7647-01-0: final RQ = 5000 pounds (2270 kg)

CERCLA/SARA Section 313:

This material contains Methyl alcohol (CAS# 67-56-1, 90.9%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
This material contains Hydrochloric acid (CAS# 7647-01-0, 9.1%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous:

CAS# 7647-01-0 is considered highly hazardous by OSHA.

US State

State Right to Know:

Methyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Hydrogen chloride can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.



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California Regulations:

None.

European/International Regulations

Canadian DSL/NDSL:

CAS# 67-56-1 is listed on Canada's DSL List.
CAS# 7647-01-0 is listed on Canada's DSL List.
CAS# 100-10-7 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List.
CAS# 7647-01-0 is listed on Canada's Ingredient Disclosure List.
CAS# 100-10-7 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: April 14, 1998

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