

Material Safety Data Sheet

Benzaldehyde

Section 1 – Chemical Product and Company Identification

MSDS Name: - Benzaldehyde

Synonyms: - Benzenecarboxaldehyde, artificial almond oil, benzene carbaldehyde, benzoic aldehyde

Company Identification: - Kadillac Chemicals Pvt Ltd
3, Shivashray Soc, Vasna road,
Opposite Pancham Icon,
Vadodara, Gujarat, India – 390015

For Information Call: - +91 99099 29966

For Emergencies Call: - +91 99099 29966

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name	Percentage	EINECS/ELINCS
100-52-7	Benzaldehyde	99.5 min	202-860-4

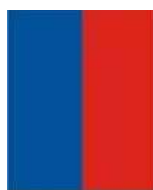
Section 3 – Hazards Identification

Emergency Overview

Appearance: - Yellow liquid. Flash Point: 64 °C. Combustible liquid and vapour. Harmful if swallowed.

Potential Health Effects

- **Eye:** - Causes eye irritation
- **Skin:** - Causes skin irritation
- **Ingestion:** - Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhoea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure



- **Inhalation:** - Inhalation of high concentrations may cause central nervous effects characterized by nausea, headache, dizziness, unconsciousness, and coma. May cause respiratory tract irritation. May cause narcotic effects in high concentration.
- **Chronic:** - Prolonged or repeated skin contact may cause dermatitis. May cause kidney injury.

Section 4 – First Aid Measures

- **Eyes:** - Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- **Skin:** - Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
- **Ingestion:** - If victim is conscious and alert, give 2-4 cupfuls of milk or water
- **Serious Ingestion:** - Not Available
- **Inhalation:** - Remove from exposure to fresh air immediately. If not breathing, give artificial respiration, if breathing is difficult give oxygen. Get medical aid.
- **Serious Inhalation:** - Not Available
- **Antidote:** - None reported
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Section 5 – Fire Fighting Measures

General Information: - As in any fire, wear a self-contained breathing apparatus in pressure-demand, and full protective gear. Vapours may form an explosive mixture with air. Vapours can travel to a source of ignition and flash back.

Extinguishing Media: - Use water spray to cool fire-exposed containers. Use water spray, dry chemical or foam, or carbon dioxide.

Flash Point: - 64 °C (147.2 °F)

Auto ignition Temperature: - 192 °C (377.6 °F)

Explosion limits: - 1.4% to 8.5%

NFPA Rating: -



Health	2
Fire	2
Reactivity	0
Personal Protection	H



Section 6 – Accidental Release Measures

General Information: - Use Proper Protective equipment as indicated in section 8.

Spills/Leaks: - Avoid runoff into storm sewers and ditches which lead to waterways. Use water spray to disperse the gas/vapour. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand or vermiculite. Do not use combustible materials such as sawdust.

Section 7 – Handling and Storage

Handling: - Wash thoroughly after handling. Use only in a well ventilated area. Ground and bound containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapour), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: - Keep away from heat and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from reducing agents. Do not store near alkaline substances.

Section 8 – Exposure Controls, Personal Protection

Engineering Controls: - Use adequate ventilation to keep airborne concentrations low.

Exposure Limits: -

Chemical Name	ACGIH	NIOSH	OSHA – Final PELs
Benzaldehyde	None listed	None listed	None listed

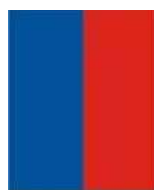
OSHA Vacated PELs: - Benzaldehyde: No OSHA Vacated PELs are listed for this chemical.

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. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 – Physical and Chemical Properties

Physical State: - Liquid

Appearance: - Colourless to Pale Yellow

Odour: - Bitter Almond

pH: - 5.9

Vapour Pressure: - 1mm Hg @ 26.2 °C

Vapour Density: - 3.65

Evaporation Rate: - Not Available

Viscosity: - Not Available

Boiling Point: - 178 °C

Freezing/Melting Point: - (-56) °C

Decomposition Temperature: - Not Available

Solubility: - Slightly Soluble

Specific Gravity/Density: - 1.0415 @ 10 °C

Molecular Formula: - C₆H₅CHO

Molecular Weight: - 106.0414

Section 10 – Stability and Reactivity

Chemical Stability: - Stable

Conditions to Avoid: - High temperatures, incompatible materials, ignition sources.

Incompatibilities with other Materials: - Incompatible with strong oxidizing agents. Oxidizes in air to Benzoic Acid. Reacts dangerously with performic acid.

Hazardous Decomposition Products: - Carbon Monoxide, irritating and toxic gases, carbon dioxide.

Hazardous Polymerization: - Has not been reported.



Section 11 – Toxicological Information

RTECS#: - CU4375000

Routes of Entry: - Eye contact, Inhalation, Ingestion.

Toxicity to Animals: - Acute oral toxicity (LD50): 1300 mg/kg [Rat]

Chronic Effects on Humans: - Causes damage to the following organs: lungs, mucous membranes.

Other Toxic Effects on Humans: - Very hazardous in case of ingestion, Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (premeator)

Section 12 – Ecological Information

Ecotoxicity: - Fish: Rainbow trout: LC50 =11 mg/L; 96 Hr.; Unspecified Fish: Bluegill/Sunfish: LC50 =1.1-7.6 mg/L; 96 Hr.; Unspecified Water flea LC50 =5.0 mg/L; 24 Hr.; Unspecified Bacteria: Phytobacterium phosphoreum: EC50 =4.85 - 6.11 mg/L; 5, 15, 30 Minutes; Microtox Test, 15 degrees C No data available.

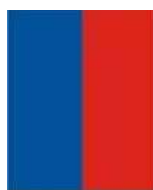
Environmental: - Based upon a measured log Kow of 1.48 and a water solubility of 6950 mg/l at 25 deg C, the BCF for benzaldehyde can be estimated to be 7.8 and 4.2, respectively, these BCF values suggest that the biconcentration in aquatic organisms is not important. A number of biological screening studies have demonstrated that benzaldehyde is readily biodegradable. Estimated Koc values of 34 and 150 suggest that benzaldehyde will leach readily.

Physical: - Benzaldehyde has a BOD: 50%, 10 days; 150%, 5 days.

Other: - Benzaldehyde absorbs UV irradiation weakly (extinction coefficient of 0-30/M-cu cm) in the spectra between 300 and 380 nm.

Section 13 – Disposal Considerations

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.



Section 14 – Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name	Benzaldehyde	Benzaldehyde	Benzaldehyde	Benzaldehyde	Benzaldehyde
Hazard Class	9	9	9 (32 C)	9	9
UN Number	UN 1990	UN 1990	UN 1990	UN 1990	UN 1990
Packing Group	III	III		III	III

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