










255 Norman.
Lachine (Montreal), Que
H8R 1A3

Material Safety Data Sheet

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)
(CAN) CANUTEC : 1(613) 996-6666 (24hrs)
(USA) Anachemia : 1(518) 297-4444
(CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: B-3 D-2B		TDG CLASS: 9 PIN: UN1990 PG: III
 	   	

Section I. Product Identification and Uses

Product name	BENZALDEHYDE	CI#	Not available.
Chemical formula	C6H5CHO	CAS#	100-52-7
Synonyms	Benzoic aldehyde, Artificial Almond oil, Benzenecarbonal, Phenylmethanal, Benzene carbaldehyde, AC-0984, AC-0985, 10580, 10592	Code	AC-0984
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3	Formula weight	106.13
		Supersedes	
Material uses	For laboratory use only.		

Section II. Ingredients

Name	CAS #	%	TLV
1) BENZALDEHYDE	100-52-7	99+	Not established by ACGIH

Toxicity values of the hazardous ingredients

BENZALDEHYDE:
ORAL (LD50): Acute: 1300 mg/kg (Rat). 28 mg/kg (Mouse). 1000 mg/kg (Guinea pig).
INTRAPERITONEAL (LD50): Acute: 9 mg/kg (Mouse).
SUBCUTANEOUS (LD50): Acute: 5000 mg/kg (Rabbit).

Section III. Physical Data

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Physical state and appearance / Odor	Colorless to yellow liquid. Almond odor.
pH (1% soln/water)	Not available.
Odor threshold	Not available.
Percent volatile	Not available.
Freezing point	-26°C
Boiling point	177 to 179°C
Specific gravity	1.044-1.047 (Water = 1)
Vapor density	3.7 (Air = 1)
Vapor pressure	4 mm Hg @ 45°C
Water/oil dist. coeff.	Not available.
Evaporation rate	<1 (n-Butyl acetate = 1).
Solubility	0.4 ml/100 ml H ₂ O @ 25°C (in H ₂ O)

Section IV. Fire and Explosion Data

Flash point	CLOSED CUP: 62°C
Flammable limits	LOWER: 1.4% @ 20°C UPPER: 13.5%
Auto-ignition temperature	179°C
Fire degradation products	Carbon oxides (CO, CO ₂).
Fire extinguishing procedures	Use DRY chemical, carbon dioxide, alcohol-resistant foam or water spray. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out.
Fire and Explosion Hazards	Combustible liquid. Vapor may travel considerable distance to source of ignition and flash back, eliminate all sources of ignition. Vapor forms explosive mixture with air. Container explosion may occur under fire conditions or when heated. Contact with oxidizers may cause fire and/or explosion. The sensitivity to static discharge is not available. The sensitivity to impact is not available. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Eye contact. Skin contact. Skin absorption.
Effects of Acute Exposure	May be fatal by ingestion, inhalation or skin absorption. Irritant. Target organs: central nervous system.
Eye	Causes severe irritation. May cause permanent damage.
Skin	Causes skin irritation. Readily absorbed through skin. Defatting dermatitis with prolonged use. May cause allergic skin reactions with repeated exposure. IRRITATION: SKIN-RABBIT 500 mg/24H MODERATE.
Inhalation	Material is irritating to mucous membranes and upper respiratory tract. May cause central nervous system depression (headache, nausea, vomiting, dizziness, etc...), dyspnea, convulsions, liver, kidney, blood, and lung damage and respiratory failure (high doses). May have anesthetic effect with prolonged use.
Ingestion	Causes gastrointestinal irritation. See inhalation. Estimated lethal dose is 2 ounces.

Section V. Toxicological Properties

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Effects of Chronic Overexposure

May cause dermatitis, allergic skin reaction, liver and kidney damage. May cause heritable genetic damage. Carcinogen. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. To the best of our knowledge the chronic toxicity of this substance has not been fully investigated.

Section VI. First Aid Measures

Eye contact

Immediately flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Call a physician.

Skin contact

Immediately flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

Inhalation

Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Call a physician.

Ingestion

If conscious, wash out mouth with water. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.

Section VII. Reactivity Data

Stability

Unstable. Air and light sensitive. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.

Hazardous decomp. products

Not available.

Incompatibility

Oxidizing agents, acids, bases, reducing agents, heavy metal salts, copper, brass, alkaline cyanide solutions, performic acid.

Reaction Products

Rags and activated carbon saturated with benzaldehyde may ignite spontaneously. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

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Protective Clothing in case of spill and leak Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Spill and leak Evacuate the area. Eliminate all sources of ignition. Absorb on sand or vermiculite and place in a closed container for disposal. Use non-sparking tools. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch damaged container or spilled material. Runoff to sewer may create fire or explosion hazard.

Waste disposal Burn in a chemical incinerator equipped with an after burner and scrubber. According to all applicable regulations. Harmful to aquatic life at low concentrations. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

Storage and Handling Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed and dry. Manipulate under an adequate fume hood. Ground the container while dispensing. Use explosion proof equipment. Use non-sparking tools. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible.). Store under nitrogen.

Section IX. Protective Measures

Protective clothing Splash goggles. Impervious rubber gloves, apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. If use conditions generate vapors or mists, wear a NIOSH-approved respirator appropriate for those emission levels. Appropriate respirators may be a full facepiece or a half mask air-purifying cartridge respirator equipped for organic vapors/mists, a self-contained breathing apparatus in the pressure demand mode, or a supplied-air respirator. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.

Engineering controls Use in a chemical fume hood. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments Combustible liquid! Highly toxic! Carcinogen! Mutagen! Sensitizer! Irritant! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use in a chemical fume hood. Store under nitrogen. Air and light sensitive. Keep away from heat, sparks and flame. Use non-sparking tools. Bond and ground transfer containers and equipment to avoid static accumulation.
RTECS NO: CU4375000 (Benzaldehyde).



NFPA

Prepared by MSDS Department/Département de F.S..

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