

Infosafe No™ 1CHHM Issue Date : July 2021 RE-ISSUED by CHEMSUPP

Product Name **BENZALDEHYDE**

Classified as hazardous

1. Identification

GHS Product Identifier BENZALDEHYDE

Company Name CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)

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Recommended use of the chemical and restrictions on use Flavouring agent and odourant in food, drink, cosmetics and cleaning products; intermediate in manufacturing dyes, odourants, flavouring agents, perfumes and aromatic alcohols; pharmaceuticals and pesticides; solvent for oils, resins, some cellulose ethers, cellulose acetate and nitrate, plastics additive, manufacture of cinnamic acid, benzoic acid, pharmaceuticals, photographic chemicals and laboratory reagent.

Other Names	<u>Name</u>	<u>Product Code</u>
	BENZALDEHYDE LR	BL046
	BENZALDEHYDE BP	BP046
	Benzoic aldehyde	
	Artificial essential oil of almond	
	Synthetic oil of bitter almond	
	Bitter almond oil	

Other Information

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture Acute Toxicity - Oral: Category 4
Acute Toxicity - Inhalation: Category 4

Signal Word (s) WARNING

Hazard Statement (s) H302 Harmful if swallowed.
H332 Harmful if inhaled.

Pictogram (s) Exclamation mark



Precautionary statement – Prevention P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.

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Precautionary

statement – Response P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.

Precautionary statement – Disposal

Dispose of contents/container to an approved waste disposal plant

3. Composition/information on ingredients

Information on Composition

Benzaldehyde can be derived from the following ways:
1. Air oxidation of toluene with uranium or molybdenum oxides as catalysts;
2. reaction of benzyl dichloride with lime; or
3. extraction from oil of bitter almond.

Ingredients

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Benzaldehyde	100-52-7	100 %

Other Information

Benzaldehyde normally contains trace amounts of chlorine, water, benzoic acid, benzal chloride and nitrobenzene.

4. First-aid measures

Inhalation

If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Ingestion

Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Skin

Remove contaminated clothing and wash before re-use. Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention.

Eye contact

Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist.

First Aid Facilities

Maintain eyewash fountain and safety shower in work area.

Advice to Doctor

Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information

For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products

Oxides of carbon.

Specific Methods

Small fire: Use foam, dry chemical, CO2 or water spray.
Large fire: Use foam, fog or water spray - Do NOT use water jets.
Use water spray to cool containers.

Hazchem Code

3[Z]

Other Information

Under fire conditions this material may decompose to form flammable and/or explosive mixtures in air.

6. Accidental release measures

Spills & Disposal

Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 50m. All equipment in handling this product must be earthed. Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas.
Vapour suppressing foam may be used to control vapours. Water spray may be used to knock down or divert vapours.
Absorb spill with earth, sand or other non-combustible material. Use clean, non-sparking tools to collect material and place it in loosely-covered metal or plastic containers for later disposal.
SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

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Personal Precautions	Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum.

7. Handling and storage

Precautions for Safe Handling	Avoid generating and inhaling mist. Avoid contact with skin and eyes. Take measures to prevent the build up of electrostatic charge.
Conditions for safe storage, including any incompatibilities	Store in cool place and out of direct sunlight. Store in well ventilated area. Store away from sources of heat or ignition. Store away from oxidizing agents. Keep containers securely sealed and protected against physical damage.
Storage Regulations	Refer Australian Standard AS/NZS 4681:2000 'The storage and handling of Class 9 (miscellaneous) dangerous goods and articles'.

8. Exposure controls/personal protection

Other Exposure Information	No exposure standards have been established for this product by Safe Work Australia, however, the TWA exposure standard for dusts/mists not otherwise specified is 10 mg/m ³ . All atmospheric contamination should be kept to as low a level as is workable.
Appropriate engineering controls	Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Where sufficient ventilation is not available, avoid breathing dusts by wearing an AS 1716 approved P1 or P2 particulate filter respirator. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Wear anti-static protective clothing if there is a risk of ignition from static electricity.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Liquid
Appearance	Colourless to pale yellow coloured, oily liquid.

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Odour	Odour resembling oil of bitter almond.
Melting Point	-26 °C
Boiling Point	179 °C
Solubility in Water	Slightly soluble in water (@ 20 °C)
Solubility in Organic Solvents	Very soluble in alcohol, ether, benzene, acetone, petroleum ether, concentrated sulfuric acid, liquid carbon dioxide, liquid ammonia, methylamine and diethylamine.
Specific Gravity	1.040 - 1.050 (@ 20 °C)
pH	~ 5.9 (1 g/l, H ₂ O, 20 °C)
Vapour Pressure	0.127 mm Hg (25 °C)
Vapour Density (Air=1)	3.65
Evaporation Rate	0.04 (Butyl acetate = 1)
Flash Point	64 °C (closed cup)
Flammability	Combustible.
Auto-Ignition Temperature	191.6 °C
Flammable Limits - Lower	1.4 vol%
Flammable Limits - Upper	8.5 vol%
Molecular Weight	106.13
Other Information	Taste: Burning aromatic taste. Refractive Index: 1.545 (20 °C, 589nm)

10. Stability and reactivity

Chemical Stability	Moderately stable. Oxidises readily. Oxidises in air to benzoic acid. This process is accelerated by light.
Conditions to Avoid	Exposure to moisture. Light. Heat, flames, ignition sources and incompatibles.
Incompatible Materials	Strong oxidising agents, strong reducing agents, strong acids, strong bases, aluminium, iron, phenols and oxygen.
Hazardous Decomposition Products	Oxides of carbon and unidentified organic compounds.
Possibility of hazardous reactions	May react violently with strong oxidising agents. Condensation reaction occurs in contact with strong bases, strong reducing agents and alkaline cyanide solution. Heavy metal salts catalyse the oxidation of benzaldehyde by atmospheric oxidation.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 1300 mg/kg
Acute Toxicity - Dermal	LD50 (rabbit): 1250 mg/kg
Ingestion	Harmful if swallowed. Ingestion of material may cause irritation to the mouth and may cause diarrhoea, vomiting and abdominal pain.
Inhalation	Harmful if inhaled. May cause irritation to the mucous membrane and the upper airways of the nose, throat and lungs. May cause dizziness, headaches, drowsiness and nausea.
Skin	Skin contact may cause irritation and allergic reaction in sensitive individuals.

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Eye	The liquid or high concentrations of vapours can cause irritation with redness, tearing and inflammation.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Not classified based on available information.
Chronic Effects	Repeated or prolonged skin contact may remove skin oils, irritate the skin and cause dermatitis (redness, swelling, scaling and itching). Chronic inhalation may cause lung injury, convulsions and respiratory failure.
Mutagenicity	Not classified based on available information.

12. Ecological information

Persistence and degradability	Readily biodegradable.
Other Precautions	Do not allow material to be released to the environment without proper governmental permits.
Acute Toxicity - Daphnia	EC50 - Daphnia magna (Water flea) - 50 mg/l - 24 h

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
Waste Disposal	Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

14. Transport information

Transport Information	Class 9 Miscellaneous dangerous goods shall not be loaded in a vehicle with: - Class 1 Explosives - Class 5. 1 Oxidizing agents (when Class 9 substance capable of igniting and burning - Class 5. 2 Organic peroxides (when Cl. 9 capable of igniting/burning)
U.N. Number	1990
UN proper shipping name	BENZALDEHYDE.
Transport hazard class(es)	9
Hazchem Code	3[Z]
Packing Group	III
IERG Number	18

15. Regulatory information

Regulatory Information	All the constituents of this product are listed on the Australian Inventory of Chemical Substances (AICS), or exempted. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	Not Scheduled

16. Other Information

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**Literature
References**

'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'.
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.
Safe Work Australia, 'Hazardous Chemical Information System'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

Contact Person/Point

Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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**Empirical Formula
& Structural
Formula**

C6 H5 CHO

...End Of MSDS...

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