

1. IDENTIFICATION

Product Name	Vanillin
Other Names	4-Hydroxy-3-methoxybenzaldehyde
Uses	Flavouring agent.
Chemical Family	No Data Available
Chemical Formula	C8H8O3
Chemical Name	Benzaldehyde, 4-hydroxy-3-methoxy-
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Acute Toxicity (Oral) - Category 4
 Serious Eye Damage/Irritation - Category 2A
 Sensitisation (Skin) - Category 1

Pictograms



Signal Word Warning

Hazard Statements

H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.

Precautionary Statements

Prevention	P280	Wear protective gloves/eye protection/face protection.	
	P261	Avoid breathing dust.	
	P270	Do not eat, drink or smoke when using this product.	
	P272	Contaminated work clothing should not be allowed out of the workplace.	
	Response	P337 + P313	If eye irritation persists: Get medical advice/attention.
		P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
		P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
		P363	Wash contaminated clothing before reuse.
	Disposal	P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
		P330	Rinse mouth.
P305 + P351 + P338		IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.	

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications Health Hazards **6.1D** Substances that are acutely toxic - Harmful

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Vanillin	C8H8O3	121-33-5	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth. Do not induce vomiting. Call a Poison Centre or doctor/physician if you feel unwell.
Eye	IF IN EYES: Rinse cautiously with water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs, get medical advice/attention.
Inhaled	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician if experiencing respiratory symptoms or if you feel unwell.
Advice to Doctor	Treat symptomatically.
Medical Conditions Aggravated by Exposure	Skin sensitiser: May cause an allergic skin reaction.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Combustible solid.
Extinguishing Media	Use dry chemical, carbon dioxide, foam or water spray for extinction.
Fire and Explosion Hazard	DUST EXPLOSION HAZARD: Finely dispersed particles form explosive mixtures in air.
Hazardous Products of Combustion	Fire may produce irritating and/or toxic fumes, including Carbon oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Self-contained breathing apparatus (SCBA) in combination with normal firefighting clothing (fire kit).
Flash Point	153 °C [Cleveland open cup]
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	400 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid dust formation. Do not touch or walk through spilled material. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Sweep/shovel up material and place into suitable containers for later disposal (see SECTION 13); if appropriate, moisten first to prevent dusting.
Containment	Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	Wash with plenty of water - Retain contaminated washing water and dispose it (see SECTION 13).
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away; Keep upwind.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation/deposition. Avoid breathing dust and contact with eyes, skin and clothing. Use personal protective equipment as required (see SECTION 8). Dust explosion hazard: Take precautionary measures against static discharge. Keep away from heat and ignition sources - No smoking. Use explosion-proof electrical/ventilating/lighting equipment.
Storage	Store in a cool, dry and well-ventilated place and out of direct sunlight. Keep container tightly closed. Protect from exposure to air and moisture. Keep away from heat and ignition sources - No smoking. Keep away from incompatible materials (strong oxidising agents, strong bases).
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ (total); TWA = 3 mg/m ³ (respirable). - OSHA PEL (Particulates not otherwise regulated): TWA = 15 mg/m ³ (total); TWA = 5 mg/m ³ (respirable).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Dust explosion hazard: Use explosion-proof electrical/ventilating/lighting equipment.
Personal Protection Equipment	Respiratory protection: In case of inadequate ventilation or if an inhalation risk exists, wear respiratory protection. Recommended: Dust mask/respirator, filter type P (Particulate). Eye/face protection: Wear eye protection/face protection. Recommended: Safety glasses with side-shields; Chemical goggles. Use equipment for eye protection tested and approved under appropriate government standards. Hand protection: Handle with gloves. Recommended (for full/splash contact): Impervious gloves, e.g. Nitrile rubber (Min. layer thickness: 0.11 mm; Break through time: 480 min). Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls, safety shoes. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance(s) at the specific workplace.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline powder
Odour	Pleasant, aromatic Vanilla
Colour	White to yellowish
pH	No Data Available
Vapour Pressure	Negligible (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	285 °C
Melting Point	80 - 83 °C
Freezing Point	No Data Available
Solubility	10 g/L water
Specific Gravity	1.056 (Water = 1)
Flash Point	153 °C [Cleveland open cup]
Auto Ignition Temp	400 °C
Evaporation Rate	No Data Available

Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	1.06 g/cm ³
Specific Heat	No Data Available
Molecular Weight	152.15
Net Propellant Weight	No Data Available
Octanol Water Coefficient	log Pow = 1.21
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Dust explosion possible if in powder or granular form, mixed with air.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Combustible solid.
Reactions That Release Gases or Vapours	Fire/heating may produce irritating and/or toxic fumes, including Carbon oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Avoid dust formation/deposition. Keep away from heat and ignition sources - No smoking. Protect from exposure to air and moisture.
Materials to Avoid	Incompatible/reactive with strong oxidising agents, strong bases, halogens.
Hazardous Decomposition Products	Fire/heating may produce irritating and/or toxic fumes, including Carbon oxides.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Acute toxicity: Harmful if swallowed; Ingestion of large amounts may cause nausea and vomiting.</p> <p>Skin corrosion/irritation: Repeated or prolonged skin contact may cause irritation and may lead to allergic contact dermatitis.</p> <p>Eye damage/irritation: Causes serious eye irritation, redness.</p> <p>Respiratory/skin sensitisation: Skin sensitiser - May cause an allergic skin reaction.</p> <p>Germ cell mutagenicity: No information available.</p> <p>Carcinogenicity: No information available.</p> <p>Reproductive toxicity: No information available.</p> <p>STOT - single exposure: Breathing in dust may cause respiratory irritation, cough.</p>
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STOT - repeated exposure: No information available.
Aspiration toxicity: No information available.

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity Aquatic toxicity:
- LC50, Pimephales promelas (fathead minnow): 57 mg/L (96 h) [semi-static test].
- LC50, Pimephales promelas (fathead minnow): 88 mg/L (96 h) [static test].
- LC50, Pimephales promelas (fathead minnow): 53 - 61.3 mg/L (96 h) [flow-through test].

Persistence/Degradability This product is readily biodegradable.

Mobility No information available.

Environmental Fate Harmful to aquatic life - Avoid release to the environment; Prevent entry into drains and waterways.

Bioaccumulation Potential Not expected to bioconcentrate or bioaccumulate.

Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Recover if possible. Dispose of content/container in accordance with local/regional/national regulations. Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Special Precautions for Land Fill Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name VANILLIN

Class No Data Available

Subsidiary Risk(s) No Data Available
No Data Available

UN Number No Data Available

Hazchem No Data Available

Pack Group No Data Available

Special Provision No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name VANILLIN

Class No Data Available

Subsidiary Risk(s) No Data Available
No Data Available

UN Number No Data Available

Hazchem No Data Available

Pack Group No Data Available

Special Provision No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name VANILLIN
Class No Data Available
Subsidiary Risk(s) No Data Available
No Data Available
UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name VANILLIN
Class No Data Available
Subsidiary Risk(s) No Data Available
No Data Available
UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

Sea Transport

IMDG Code

Proper Shipping Name VANILLIN
Class No Data Available
Subsidiary Risk(s) No Data Available
UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available
EMS No Data Available
Marine Pollutant No

Air Transport

IATA DGR

Proper Shipping Name VANILLIN
Class No Data Available
Subsidiary Risk(s) No Data Available
UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information No Data Available
Poisons Schedule (Aust) Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code HSR003498

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes VANILL1000, VANILL1001, VANILL1002, VANILL1003, VANILL1004, VANILL1005, VANILL1006, VANILL1007, VANILL1008, VANILL1009, VANILL1010, VANILL1011, VANILL1100, VANILL1101, VANILL2000, VANILL2125, VANILL3000, VANILL3001, VANILL4010, VANILL4011, VANILL4025, VANILL5025, VANILL5026, VANILL6000, VANILL7000, VANILL8000, VANILL8001, VANILL8002, VANILL8050, VANILL9010, VANILL9011, VANILL9012, VANILL9025, VANILL9050

Revision 3

Revision Date 23 Nov 2017

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO₂ Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH₂O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH₂O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight