

## Material Safety Data Sheet

Version 4.2

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Vanillin

Product Number : V1104

Brand : Sigma-Aldrich

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

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2. HAZARDS IDENTIFICATION

## Emergency Overview

## OSHA Hazards

Harmful by ingestion., Skin sensitiser, Irritant

## GHS Classification

Acute toxicity, Oral (Category 4)

Eye irritation (Category 2A)

Skin sensitization (Category 1)

Acute aquatic toxicity (Category 3)

## GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H302

Harmful if swallowed.

H317

May cause an allergic skin reaction.

H319

Causes serious eye irritation.

H402

Harmful to aquatic life.

Precautionary statement(s)

P280

Wear protective gloves.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## HMIS Classification

Health hazard: 2

Flammability: 0

Physical hazards: 0

## NFPA Rating

Health hazard: 2

Fire: 0

**Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** Harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** Harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : 4-Hydroxy-3-methoxybenzaldehyde

Formula : C<sub>8</sub>H<sub>8</sub>O<sub>3</sub>

Molecular Weight : 152.15 g/mol

Component		Concentration
<b>Vanillin</b>		
CAS-No.	121-33-5	-
EC-No.	204-465-2	

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**4. FIRST AID MEASURES**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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**5. FIREFIGHTING MEASURES**

**Conditions of flammability**

Not flammable or combustible.

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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**7. HANDLING AND STORAGE**

**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Air, light, and moisture sensitive.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Vanillin	121-33-5	TWA	10 mg/m <sup>3</sup>	USA. Workplace Environmental Exposure Levels (WEEL)

**Personal protective equipment****Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form	solid
Colour	light yellow

**Safety data**

pH	no data available
Melting point/freezing point	Melting point/range: 81 - 83 °C (178 - 181 °F) - lit.
Boiling point	170 °C (338 °F) at 20 hPa (15 mmHg) - lit.
Flash point	no data available
Ignition temperature	400 °C (752 °F)
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	1 hPa (1 mmHg) at 107 °C (225 °F)

	< 0.01 hPa (< 0.01 mmHg) at 25 °C (77 °F)
	0.0022 hPa (0.0017 mmHg) at 25 °C (77 °F)
Density	1,056 g/cm <sup>3</sup> at 20 °C (68 °F)
Water solubility	10 g/l at 25 °C (77 °F) - slightly soluble
Partition coefficient: n-octanol/water	log Pow: 1.23 at 22 °C (72 °F)
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - rat - 1,580 mg/kg

Remarks: Behavioral:Coma.

#### Inhalation LC50

no data available

#### Dermal LD50

LD50 Dermal - rabbit - > 5,010 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Food intake (animal).

Gastrointestinal:Peritonitis.

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

Eyes - rabbit - Irritating to eyes. - 72 h

### Respiratory or skin sensitization

May cause allergic skin reaction.

no data available

### Germ cell mutagenicity

Genotoxicity in vitro - Human - lymphocyte

Cytogenetic analysis

Genotoxicity in vitro - Human - lymphocyte

Sister chromatid exchange

### **Carcinogenicity**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### **Reproductive toxicity**

Reproductive toxicity - rat - Subcutaneous

Maternal Effects: Ovaries, fallopian tubes. Maternal Effects: Uterus, cervix, vagina.

no data available

### **Teratogenicity**

no data available

### **Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

### **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

### **Aspiration hazard**

no data available

### **Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.

### **Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### **Synergistic effects**

no data available

### **Additional Information**

RTECS: YW5775000

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## **12. ECOLOGICAL INFORMATION**

### **Toxicity**

Toxicity to fish	semi-static test LC50 - Pimephales promelas (fathead minnow) - 57 mg/l - 96 h
	static test LC50 - Pimephales promelas (fathead minnow) - 88 mg/l - 96 h
	flow-through test LC50 - Pimephales promelas (fathead minnow) - 53 - 61.3 mg/l - 96 h

### **Persistence and degradability**

no data available

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

### **PBT and vPvB assessment**

no data available

### **Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

no data available

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### 13. DISPOSAL CONSIDERATIONS

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

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### 14. TRANSPORT INFORMATION

#### DOT (US)

Not dangerous goods

#### IMDG

Not dangerous goods

#### IATA

Not dangerous goods

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### 15. REGULATORY INFORMATION

#### OSHA Hazards

Harmful by ingestion., Skin sensitiser, Irritant

#### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 311/312 Hazards

Acute Health Hazard

#### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

#### Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Vanillin	121-33-5	1989-12-01

#### New Jersey Right To Know Components

	CAS-No.	Revision Date
Vanillin	121-33-5	1989-12-01

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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### 16. OTHER INFORMATION

#### Further information

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