



VANILLIN (METHOXY-13C, 99%)

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/01/2011

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Version: 2.0

CLM-1200

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Substance name : VANILLIN (METHOXY-13C, 99%)
EC no : 204-465-2 (Unlabeled)
CAS No : 86884-84-6
Product code : CLM-1200
Formula : HOC6H3(O*CH3)CHO
Synonyms : 4-Hydroxy-3-methoxybenzaldehyde

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302
Eye Irrit. 2 H319
Aquatic Chronic 3 H412

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

R52/53

Full text of R-phrases: see section 16

Classification (GHS-US)

Acute Tox. 4 (Oral) H302
Eye Irrit. 2A H319
Aquatic Acute 3 H402
Aquatic Chronic 3 H412

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning

Hazard statements (CLP) : H302 - Harmful if swallowed
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (CLP) : P264 - Wash Both hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear protective clothing, protective gloves
P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor...if you feel unwell
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - Rinse mouth
P337+P313 - If eye irritation persists: Get medical advice/attention

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H302 - Harmful if swallowed
H319 - Causes serious eye irritation
H402 - Harmful to aquatic life
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P280 - Wear protective clothing, protective gloves
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - If swallowed, rinse mouth
P337+P313 - If eye irritation persists: Get medical advice/attention
P501 - Dispose of contents/container to Comply with applicable regulations.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
VANILLIN (METHOXY-13C, 99%) (Main constituent)	(CAS No) 86884-84-6 (EC no) 204-465-2 (Unlabeled)	100	R52/53
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
VANILLIN (METHOXY-13C, 99%) (Main constituent)	(CAS No) 86884-84-6 (EC no) 204-465-2 (Unlabeled)	100	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Aquatic Chronic 3, H412

Full text of R-, H- and EUH-phrases: see section 16

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Name	Product identifier	%	Classification (GHS-US)
VANILLIN (METHOXY-13C, 99%) (Main constituent)	(CAS No) 86884-84-6	100	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Aquatic Acute 3, H402 Aquatic Chronic 3, H412

Full text of H-phrases: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Move out of dangerous area. Consult a physician and show this safety data sheet.
- First-aid measures after inhalation : If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
- First-aid measures after skin contact : Wash with soap and plenty of water. Consult a physician.
- First-aid measures after eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May be harmful if inhaled. Causes respiratory tract irritation.
- Symptoms/injuries after skin contact : May be harmful if absorbed through skin. Causes skin irritation.
- Symptoms/injuries after eye contact : Causes eye irritation.
- Symptoms/injuries after ingestion : Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Wear self contained breathing apparatus for fire fighting if necessary.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus and protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

6.1.2. For emergency responders

No additional information available

6.2. 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.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
- 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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7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a dry and well-ventilated place.
Storage conditions : Store at room temperature away from light and moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

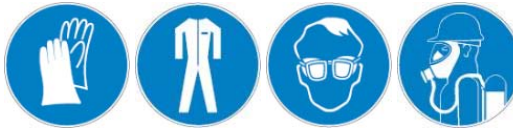
8.1. Control parameters

VANILLIN (METHOXY-13C, 99%) (86884-84-6)

USA OSHA	OSHA PEL (TWA) (mg/m3)	10 mg/m ³ USA. Workplace Environmental Exposure Levels (WEEL)
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8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Solid.
Molecular mass : 153.14 g/mol (Labeled)
Color : Light yellow.
Odor : No data available
Odor threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : 81 - 83 °C (178 - 181 °F) - lit
Freezing point : No data available
Boiling point : 170 °C (338 °F) at 20 hPa (15 mmHg) - lit
Flash point : 153 °C (307 °F) - closed cup
Self ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : 1 hPa (1mmHg) 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)
Relative vapor density at 20 °C : No data available
Relative density : 1.056 g/cm³ at 20 °C (68 °F)
Solubility : Water: 10 g/l at 25 °C (77 °F) - slightly soluble
Log Pow : 1.23 at 22 °C (72 °F)
Log Kow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Explosive limits : No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Not available.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

VANILLIN (METHOXY-13C, 99%) (86884-84-6)	
LD50 oral rat	3300 mg/kg
LD50 dermal rabbit	> 5010 mg/kg Remarks: Behavioral: Somnolence (general depressed activity). Behavioral: Food intake (animal). Gastrointestinal: Peritonitis.
ATE (oral)	1580.000 mg/kg body weight

Skin corrosion/irritation	: Not classified No data available
Serious eye damage/irritation	: Eyes - Rabbit Result: Irritating to eyes. - 72 h No data available
Respiratory or skin sensitization	: Maximisation Test (GPMT) - Guinea pig Does not cause skin sensitization. (Directive 67/548/EEC, Annex V, B.6.) No data available
Germ cell mutagenicity	: Genotoxicity in vitro - Human - lymphocyte. Cytogenetic analysis, Sister chromatid exchange
Carcinogenicity	: Not classified
Reproductive toxicity	: Rat - Subcutaneous Maternal Effects: Ovaries, fallopian tubes, uterus, cervix, vagina.
Specific target organ toxicity (single exposure)	: Not classified No data available
Specific target organ toxicity (repeated exposure)	: Not classified No data available
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

VANILLIN (METHOXY-13C, 99%) (86884-84-6)	
LC50 fish 1	57 mg/l Semi-static test - Pimephales promelas (fathead minnow) - 96 h
LC50 other aquatic organisms 1	53 - 61.3 mg/l Flow-through test - Pimephales promelas (fathead minnow) - 96 h
LC50 fish 2	88 mg/l Semi-static test - Pimephales promelas (fathead minnow) - 96 h

12.2. Persistence and degradability

VANILLIN (METHOXY-13C, 99%) (86884-84-6)	
Persistence and degradability	Not available.

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12.3. Bioaccumulative potential

VANILLIN (METHOXY-13C, 99%) (86884-84-6)	
Log Pow	1.23 at 22 °C (72 °F)
Bioaccumulative potential	Not available.

12.4. Mobility in soil

VANILLIN (METHOXY-13C, 99%) (86884-84-6)	
Ecology - soil	Not available.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : An environmental hazard cannot be excluded in the event of an unprofessional handling or disposal. Harmful to aquatic life.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

SECTION 14: Transport information

In accordance with ADR / RID / ADN / IMDG / ICAO / IATA

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Not dangerous goods.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

Special transport precautions : Not dangerous goods.

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

VANILLIN (METHOXY-13C, 99%) (86884-84-6)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

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15.2. International regulations

CANADA

VANILLIN (METHOXY-13C, 99%) (86884-84-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

15.2.1. National regulations

No additional information available

15.3. US State regulations

VANILLIN (METHOXY-13C, 99%)(86884-84-6)

State or local regulations	U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List 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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SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

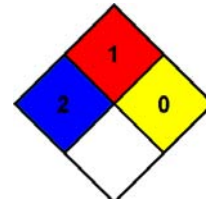
Full text of R-, H- and EUH-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
H302	Harmful if swallowed
H319	Causes serious eye irritation
H412	Harmful to aquatic life with long lasting effects
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 1 Slight Hazard

Physical : 0 Minimal Hazard

CIL Multi-Solvent Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product