

# SAFETY DATA SHEET

## Vanillin

Last changed: 02/12/2010

Replaces date: 04/05/2010

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**TRADE NAME** Vanillin  
**CHEM. NAME** 4-Hydroksy-3-metoksybenzaldehyd  
**SYNONYMS** p-Vanillin, Vanillic aldehyde, Aldéhyde vanillique  
**APPLICATION AREA** item 16  
**FORMULA** C<sub>8</sub>H<sub>8</sub>O<sub>3</sub>  
**CAS NO.** 121-33-5;  
**EC NO.** 204-465-2;

#### NATIONAL MANUFACTURER/IMPORTER

**Enterprise** Borregaard Industries Limited  
**Address** P.O.Box 162  
**Country** NORWAY  
**Telephone** +47 69 11 80 00  
**Fax** +47 69 11 86 40

#### CONTACT PERSONS

Name	E-mail	Telephone	Country
Nina Faye Haraldstad	MSDS@borregaard.com		

Emergency Phone	Type of assistance	Opening Hours
+47 69 11 88 88	Borregaard emergency no.	24 h
+47 22 59 13 00	National dept.for poisons information (Norway)	24 h

### 2. HAZARDS IDENTIFICATION

#### HEALTH

Protracted or repeated exposure may irritate the eyes, skin and respiratory system. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization in susceptible persons.

#### FIRE AND EXPLOSION

Easily ignitable.

**Classification:** Xi, R36,

**CLP Classification:** Eye Irrit. 2 H 319

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient name	Reg.No	EC No.	CAS No.	Conc. (wt%)	Classification	CLP Classification
Vanillin		204-465-2	121-33-5	> 99 %	Xi,R36	Eye Irrit. 2 H319

Explanation of symbols: T+=highly toxic, T=toxic, C=corrosive, Xn=harmful, Xi=irritant E=Explosive, O=Oxidising, F+=Extremely flammable, F=Highly flammable, N=Dangerous for the environment, Cancer=Carcinogenic, Mut=Mutagenic, Rep=Toxic for reproduction, Conc.=Concentration

### 4. FIRST AID MEASURES

#### INHALATION

Fresh air if there are symptoms of injury. Get medical attention if any discomfort continues.

#### SKIN CONTACT

Wash skin with soap and water. Remove contaminated clothing. Contact physician if irritation persists.

# SAFETY DATA SHEET

## Vanillin

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### EYE CONTACT

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Contact physician if irritation persists.

### INGESTION

Rinse the mouth with water. Contact physician if larger quantity has been consumed. In the event of stomach pains - medical treatment

### MEDICAL INFORMATION

Treat symptomatically.

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## 5. FIRE-FIGHTING MEASURES

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### EXTINGUISHING MEDIA

Use extinguishing media appropriate for surrounding fire.

### FIRE AND EXPLOSION HAZARDS

Dust may form explosive mixture with air. Not flammable, but combustible.

### PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS

Firemen must wear closed-circuit breathing equipment and full protective suits.

### OTHER INFORMATION

Carbon oxides and organic products of decomposition are emitted in a fire. Move container from fire area if it can be done without risk.

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## 6. ACCIDENTAL RELEASE MEASURES

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### PERSONAL PRECAUTIONS

Provide good ventilation. Avoid generation and spreading of dust. Note the risk of dust explosion. Avoid inhalation.

### SAFETY ACTIONS TO PROTECT EXTERNAL ENVIRONMENT

Prevent discharge of larger quantity to drain.

### METHODS FOR CLEANING UP

Collect with vacuum cleaner or carefully sweep together and collect. Avoid generation and spreading of dust. Place in a suitable container for refuse treatment according to applicable regulations. Flush area with water.

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## 7. HANDLING AND STORAGE

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### HANDLING PRECAUTIONS

Note the risk of dust explosion. Avoid dust build-up near ignition sources

### HANDLING ADVICE

Do not breathe dust. Wear necessary protective equipment.

### STORAGE

Keep in cool, dry, ventilated storage and closed containers. Ground container and transfer equipment to eliminate static electric sparks.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### EXPOSURE CONTROL

Avoid handling which leads to dust formation. Avoid inhalation. Mechanical ventilation or local exhaust ventilation may be required.

Facilities for eye rinsing must be available.

Wash at the end of each work shift and before eating, smoking and using the toilet. Isolate contaminated clothing and wash before reuse.

### RESPIRATORY PROTECTION

If necessary, respirator with P2 or P3 particle filter.

### EYE PROTECTION

Use approved safety goggles or face shield.

### HAND PROTECTION

Protective gloves (nitrile rubber, PVC).

### PROTECTIVE CLOTHING

Wear appropriate clothing to prevent repeated or prolonged skin contact.

### OEL value

Ingredient name	CAS no.	Range	ppm	mg/m3	Year	Notification
Nuisance dust, total		8 h		10	2003	

R=Toxic for reproduction, H=Skin absorption, K=Carcinogenic, A=Sensitising, T=Upper limit, M=Mutagenic

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>PHYSICAL STATE</b>	Crystals or powder.
<b>COLOUR</b>	White.
<b>ODOUR</b>	Vanilla. Characteristic odour.
<b>SOLUBILITY</b>	Soluble in: Alcohol. Chloroform. Acetic acid. Carbondisulfid Glycerol Acetone. Benzene.
<b>WATER SOLUBILITY</b>	10 g/l
<b>FAT SOLUBILITY</b>	Soluble in: Oil.

### Physical and chemical parameters

Parameter	Value/unit	Method/reference	Observation
pH in solution	4.30		
Melting point	81.00 - 83.00 °C	10% solution	
Boiling point	284.00 - 285.00 °C		
Flash point	153.00 °C		
Vapour pressure	< 0.01 hPa	25C	
Density	1.06 g/cm <sup>3</sup>		
Molecular weight	152,14		
Log Pow	1,21-1,35		
pka	7,38 (25C)		

## 10. STABILITY AND REACTIVITY

### STABILITY

Stable under recommended storage and handling conditions. Avoid heat, light & moisture.

# SAFETY DATA SHEET

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### MATERIALS TO AVOID

Oxidizing substance. Risk of exothermic reaction. Avoid contact with oxidizing substances, strong acids and strong bases.

### HAZARDOUS DECOMPOSITION PRODUCTS

Phenol. Dangerous products of decomposition: carbon monoxide. CO2

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXIC TEST RESULTS

Vanillin				
Route of exposure	Exposure time	Value/unit	Species	Source
LD50 (Dermal)		> 2000.00 mg/kg	Rat	
LD50 (Oral)		< 5000.00 mg/kg	Rat	

### INHALATION

May be irritating.

### SKIN CONTACT

Non-irritant. May cause allergic eczema in already sensitised persons. May cause allergic skin reaction.

### EYE CONTACT

Irritating to eyes.

### INGESTION

Low acute toxicity.

### SENSITISATION

May cause allergic eczema in already sensitised persons. Suspected to cause hypersensitivity and allergy.

### CARCINOGENICITY

No known information.

### MUTAGENICITY

Not a mutagen in Ames test.

### OTHER TOXICOLOGICAL INFORMATION

Level for non observed effect (NOEL); 2500mg/kg/day tested on rats (repeated oral doses)

Acceptable daily intake (ADI) for human is intended for 0-10 mg/kg/day (The Joint FAO/WHO Expert Committee on Food Additives. )

## 12. ECOLOGICAL INFORMATION

### AQUATIC ECOTOXICITY

Vanillin				
Test	Exposure time	Value/unit	Species	Source
EC50 (Acute Daphnia)	48 h	80.00 mg/l	Daphnia	
LC50 (Acute algae)		2.00 mg/l		
LC50 (Acute fish)	96 h	< 123.00 mg/l	P.promelas	

### DEGRADABILITY

Readily biodegradable. BOD5 / COD: @72 %.

### ACCUMULATION

Bioaccumulation improbable.

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### OTHER INFORMATION

Readily biodegradable.

## 13. DISPOSAL CONSIDERATIONS

### GENERAL REGULATIONS

Where possible, recycling is preferred to disposal or incineration. Refuse can be incinerated in an incinerator equipped with an afterburner and washer. Packaging must be cleaned thoroughly, do not remove labelling or warning labels. Local and EU regulations for refuse treatment must be followed. Non-dangerous waste.

## 14. TRANSPORT INFORMATION

Classified as Dangerous Goods: No

### OTHER INFORMATION

Not classified as dangerous goods.

## 15. REGULATORY INFORMATION



Signal word: Warning

EC-Label: Not assessed

### COMPOSITION

Vanillin (> 99 %)

#### H Statements

H319 Causes serious eye irritation.

#### P Statements

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305/351/338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337/313 If eye irritation persists: Get medical advice/attention.

### REFERENCES

Guiding values for pollution in the working atmosphere (ADN) (Norway-2005).

Regulation to dangerous waste from ministry of Norway (2005).

Norwegian adaption to Annex 1 of directive 67/548/EEC.

Norwegian regulations regarding classification and labelling of dangerous chemicals (incl.preparations)(2005)

ADR/RID (2007).

REACH (EC 1907/2006)

GHS / CLP (EC NO1272/2008)

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### OTHER INFORMATION

Componenti sono elencati nel EINECS(Europa), TSCA (USA),DSL (Canada),AICS(Australia) MITI(Japan) og KECL (South Korea)

European Council: List 1, Nr. 107 .France: permission to be used in food where artificial aromas can be used..FDA: GRAS Status: CFR 21 - Part. 182.60 page 413 (1995).FEMA: GRAS Status: Nr. FEMA 3107.

## 16. OTHER INFORMATION

### VENDOR NOTES

Information given in this safety data sheet is in accordance with our information, and to the best of our knowledge, was correct on the last revision date. Information given is intended to present guidelines for safe handling, use, processing, storage, transport, disposal and discharge; it is not intended to be a guarantee or quality specification. It is the responsibility of the recipient of this safety data sheet to ensure that information given here is read and understood by all who use, handle, dispose of or in any way come in contact with the product.

### LIST OF RELEVANT R-PHRASES

R36 Irritating to eyes.

### LIST OF RELEVANT H-STATEMENTS

H319 Causes serious eye irritation.

ISSUED: 05/09/2003

### REVISION HISTORY

Version	Rev. date	Responsible	Changes
0.0.6	04/05/2010	Borregaard Ind Ltd	Minor changes (NIHA)
0.0.7	02/12/2010	Borregaard Ind Ltd	Updated according to CLP (NIHA)