

# Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

## VANILLINUM

EN

FORM-06-14-01 (V00)

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Publication: 11/04/2022

Revision: XX/XX/XXXX

Version: 00



### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Product name: Vanillin  
Vanillinum  
Vanilline  
Vanilline  
Vanillin  
N° CAS: 121-33-5  
N° EC: 204-465-2

#### 1.2 Relevant identified uses of the substance/mixture and uses advised against

Identified uses: Active Pharmaceutical Ingredient or Excipient.

#### 1.3 Details of the supplier of the safety data sheet

Company: FAC SECUNDUM ARTEM NV  
Oostmalsebaan 1c (unit 5)  
2960 Sint-Lenaarts  
Belgium  
Telephone: (+32) (0)3 457 11 76  
Email: info@magis-pharma.be  
Web page: www.magis-pharma.be

#### 1.4 Emergency telephone number

Public utility foundation:	Belgisch Antigifcentrum	Centre Antipoisons Belge
Telephone:	(+32) (0)70 245 245	(Service 24/7)
Web page:	www.antigifcentrum.be	www.centreantipoisons.be

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance/mixture

##### Classification according to (EC) n° 1272/2008

Skin Sens. 1	H317
Eye Irrit. 2	H319

#### 2.2 Label elements

##### Labelling according to (EC) n° 1272/2008

Hazard pictogram(s):



Signal word(s): Attention

Hazard statements:

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

Precautionary statements:

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
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P264	Wash skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear eye protection/face protection.
P302+P352+P338	IF ON SKIN: Wash with soap and water.
P305+P351	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (see on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation.
Additional applicable label elements:	Not applicable.

### 2.3 Other hazards

Combustible solid. Divided solid. May form explosive dust-air mixture.

Results of PBT and vPvB assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Product name:	Vanillin
IUPAC name:	4-hydroxy-3-methoxybenzaldehyde
Synonyms:	Vanillaldehyde p-Vanillin
N° CAS:	121-33-5
N° EC:	204-465-2
Molecular Formula:	C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>
Content:	Vanillin contains not less than 99.0 per cent and not more than the equivalent of 101.0 per cent of 4-hydroxy-3-methoxybenzaldehyde, calculated with reference to the dried substance.

### 3.2 Mixtures

Not applicable.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

General notes:	Show this safety data sheet to the doctor in attendance. First aider needs to protect himself. Place affected clothing in a sealed bag for subsequent decontamination.
After inhalation:	Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Consult a physician if necessary.

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After skin contact:	Take off contaminated clothing and shoes immediately. Wash off with soap and water. Call a physician if irritation develops or persists.
After eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a physician.
After ingestion:	Do NOT induce vomiting. Rinse mouth with water. If symptoms persist, call a physician.

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

Not available.

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

Not available.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media: Water spray, powder, carbon dioxide (CO<sub>2</sub>). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: None known.

### 5.2 Special hazards arising from the substance/mixture

Combustible solid. Risk of dust explosion.

### 5.3 Advice for firefighters

Surrounding fires: Cool containers/tanks with water spray. Do not inhale fumes.

Protection against fire: Full protective suit. Self-contained breathing apparatus (EN 133).

Hazardous combustion products: Not available.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Avoid contact with eyes. Do not breathe dust. Personal protective equipment. Boots. Wear suitable protective equipment. Tightly fitting safety goggles. Keep away from flames and hot surfaces.

#### For emergency responders

Avoid contact with eyes. Do not breathe dust. Personal protective equipment. Boots. Wear suitable protective equipment. Tightly fitting safety goggles. Keep away from flames and hot surfaces.

### 6.2 Environmental precautions

Do not allow uncontrolled discharge of product into the environment.

### 6.3 Methods and material for containment and cleaning up

Recovery: Keep in properly labelled containers. Keep in suitable, closed containers for disposal.

Decontamination/cleaning: Wash off with plenty of water. Recover the cleaning water for subsequent disposal.

Disposal: Treat recovered material as described in section "Disposal considerations".

### 6.4 Reference to other sections

Section 8: Exposure controls/personal protection

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Section 13: Disposal considerations

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Precautions for safe handling:	Blanket with inert gas. Keep away from fire, sparks and heated surfaces. Avoid dust formation. Prevent the build-up of electrostatic charge. Protect from moisture.
Personal protection:	Not available.
Technical protective measures:	Earth the equipment. Avoid dust formation. Prevent the build-up of electrostatic charge. Ensure that eyewash stations and safety showers are close to the workstation location.
Handling:	Hygiene measures: Ensure that eyewash stations and safety showers are close to the workstation location. Use clean, well-maintained personal protection equipment. Wash hands before breaks and at the end of the working day. When using do not eat, drink or smoke.

### 7.2 Conditions for safe storage, including any incompatibilities

Storage:	Not available.
Conditions for safe storage, including any incompatibilities:	Keep container tightly closed and dry. Suitable packaging material: Polyethylene. Tinted glass. Unsuitable packaging material: Aluminium and its alloys. Steel drum.
Storage – away from:	Store protected from light. Keep away from heat. Keep away from alkalis and caustic products.

### 7.3 Specific end use(s)

Active Pharmaceutical Ingredient or Excipient

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Contains no substances with occupational exposure limit values above their regulatory reporting threshold.

Predicted No Effect Concentration (PNEC)

Product name	Compartment	Value	Remarks
Vanillin	Fresh water	0.118 mg/l	
	Marine water	0.0118 mg/l	
	Fresh water sediment	58.22 mg/kg (dw)	
	Mater sediment	5.822 mg/kg (dw)	
	Soil	11.54 mg.kg (dw)	
	STP	10 mg/l	
	Oral (secondary poisoning)		No PNEC derivation as there is no potential for bioaccumulation.

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### 8.2 Exposure controls

#### Appropriate engineering control

Effective exhaust ventilation system. Dust must be extracted directly at the point of origin.

Hygiene measures: Ensure that eyewash stations and safety showers are close to the workstation location. Use clean, well-maintained personal protection equipment. Wash hands before breaks and at the end of the working day. When using do not eat, drink or smoke.

Protective measures: The protective equipment must be selected in accordance with current CEN standards and in cooperation with the supplier of the protective equipment. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards and/or risks that may occur during use.

#### Individual protection measures

Eye/face protection: Tightly fitting safety goggles.

Skin protection: Protective suit.

Hand protection: Where there is a risk of contact with hands, use appropriate gloves. Gloves must be inspected prior to use. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Respiratory protection: Use a respirator with an approved filter if a risk assessment indicated this is necessary. Handling product in bulk: respirator with a particle filter (EN 143).

Thermal hazards: Not determined.

#### Environmental exposure control

Do not allow uncontrolled discharge of product into the environment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance: White or slightly yellowish, crystalline powder or needles.

Particle size: < 100  $\mu\text{m}$  (10 %)

< 393  $\mu\text{m}$  (90 %)

Odour: Vanilla

Odour threshold: Not available.

pH: 4.3 (1 % (m/v))

Aqueous solution

pKa: 7.3 – 7.4 (25 °C)

Melting/freezing point: Ca. 81 °C – 83 °C

Initial boiling point: 154 °C (13 hPa)

284 °C (1,013 hPa)

Boiling range: Not available.

Flash point: 160 °C (1,022 hPa), closed cup, Method: EU Test Guideline A9

Evaporation rate: Not available.

Flammability (solid/gas): Not highly flammable. Method: test Directive 92/69/EEC – Annex V part A10

May form combustible dust concentrations in air.

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	Combustible solids.
Upper/lower flammability or explosive limits:	Explosiveness: Not explosive.
Vapour pressure:	0.0029 hPa (25 °C) 0.17 hPa (65 °C)
Vapour density:	5.3 (25 °C)
Relative density:	Not available.
Solubility:	Freely soluble in alcohol and in methanol. It dissolves in dilute solutions of alkali hydroxides. Soluble in ethyl acetate and diethylether.
Solubility in water:	Slightly soluble in water. 9 g/l (25 °C)
Partition coefficient (n-octanol/water):	Log Pow: 1.17 – 1.21 (25 °C)
Auto-ignition temperature:	Not applicable solid for which the melting point is < 160 °C
Decomposition temperature:	Not available.
Viscosity:	Not applicable, solid.
Explosive properties:	Negative Method: EU Test Guideline A14 Mechanical sensitivity (shock)  Negative Method: EU Test Guideline A14 Mechanical sensitivity (friction)  Negative Method: EU Test Guideline A14 Thermal sensitivity
Oxidising properties:	Not considered as oxidising, Structure-activity relationship (SAR)

### 9.2 Other information

Molecular weight: 152.15 g/mol  
Sublimation point: 70 °C  
Density: 1.06 g/cm<sup>3</sup> (20 °C)  
Bulk density: ca. 600 kg/m<sup>3</sup> loose  
Surface tension: Not considered as surface-active, Structure-activity relationship (SAR)

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No hazards to be specially mentioned.

### 10.2 Chemical stability

Stable at room temperature.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

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### 10.4 Conditions to avoid

Heat, flames and sparks. Static electricity. Avoid dust formation.

### 10.5 Incompatible materials

Reacts with the following substances: strong bases, aluminium.

### 10.6 Hazardous decomposition products

On combustion or on thermal decomposition (pyrolysis) releases: toxic gas, (carbon oxides (CO + CO<sub>2</sub>)).

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity:	Oral	LD <sub>50</sub> : 3 300 mg/kg – rat, for males and females Method: OECD Test Guideline 401  LD <sub>50</sub> : 3 978 mg/kg – rat, for males and females Method: OECD Test Guideline 401
	Dermal	LD <sub>50</sub> : > 2000 mg/kg – rat, male and female Method : OEDC Test Guideline 402  Not classified as hazardous for acute dermal toxicity according to GHS.
Skin corrosion/irritation:	Not irritating to rabbits on cutaneous application.	
Serious eye damage/irritation:	Rabbit	Causes serious eye irritation. Method: OECD Test Guideline 405
	Magnusson and Kligman method – guinea pig Does not cause skin sensitisation.  Local lymph node assay – mouse Maximum Stimulation Index < 3  Humans No cutaneous sensitisation reaction observed. Diluted product.	
Respiratory/skin sensitisation:	Genotoxicity in vitro	In vitro tests did not show mutagenic effects.
	Genotoxicity in vivo	In vivo micronucleus test – mouse Female Oral Method: OECD Test Guideline 474 Negative Gavage
Carcinogenicity:	Oral toxicity tests on rats and mice did not reveal any carcinogenic potential.	
Reproductive toxicity:	Toxicity to reproduction/Fertility	No effect observed in male or female reproductive system in repeated dose tox studies.  The product is not considered to affect fertility.

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Developmental  
toxicity/Teratogenicity

Rat  
No embryotoxic or teratogenic effect have been  
observed.

Summary of evaluation of the  
CMR properties:

Not available.

STOT-single exposure:

The substance or mixture is not classified as specific target organ toxicant, single  
exposure according to GHS criteria.

STOT-repeated exposure:

The substance or mixture is not classified as specific target organ toxicant, repeated  
exposure according to GHS criteria.

Oral exposure 6 months – rat, male  
NOAEL: 650 mg/kg

Aspiration Hazard:

Not applicable.

Other:

Not available.

### 11.2 Additional information on potential adverse human health effects and symptoms

Eye contact:	Causes serious eye irritation.
Skin contact:	May cause an allergic skin reaction.
Inhalation:	Not available.
Ingestion:	Not available.
Aspiration:	Not available.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Acute toxicity to fish	LC <sub>50</sub> – 96 h: 57 mg/l – <i>Pimephales promelas</i> (fathead minnow) Flow-through test Analytical monitoring: yes Measured concentration Harmful to fish.
Acute toxicity to daphnia and other aquatic invertebrates	EC <sub>50</sub> – 48 h: 36.8 mg/l – <i>Daphnia magna</i> (water flea) Static test Analytical monitoring: yes Method: OECD Test Guideline 202 Measured concentration Harmful to aquatic invertebrates.
Toxicity to aquatic plants	ErC <sub>50</sub> – 72 h: 120 mg/l – <i>Pseudokirchneriella subcapitata</i> (green algae) Static test Analytical monitoring: yes End point: Growth rate Method: OECD Test Guideline 201 Measured concentration Not harmful to algae (EC/EL <sub>50</sub> > 100 mg/l) NOEC – 72 h: 47 mg/l – <i>Pseudokirchneriella subcapitata</i> (green algae)



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	Static test
	Analytical monitoring: yes
	End point: Growth rate
	Method: OECD Test Guideline 201
	No adverse chronic effect observed up to and including the threshold of 1 mg/l
Toxicity to microorganisms	NOEC: 100 mg/l
	Respiration inhibition
	Method: OECD Test Guideline 301C
Chronic toxicity to daphnia and other aquatic invertebrates	NOEC: 5.9 mg/l – 21 days – <i>Daphnia magna</i> (water flea)
	Semi-static test
	Analytical monitoring: yes
	Method: OECD Test Guideline 212
	No adverse chronic effect observed up to and including the threshold of 1 mg/l
Chronic toxicity to aquatic plants	NOEC: 47 mg/l – 72 h - <i>Pseudokirchneriella subcapitata</i> (green algae)
	Method: OECD Test Guideline 201
	Growth rate

### 12.2 Persistence and degradability

Biodegradability	Ready biodegradability study: Method: OECD Test Guideline 301C 97 – 100 % - 14 days The substance fulfils the criteria for ultimate aerobic biodegradability and ready biodegradability. Inoculum: activated sludge
Degradability assessment	The product is considered to be rapidly degradable in the environment.

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water	Not potentially bioaccumulable.
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### 12.4 Mobility in soil

Adsorption potential (Koc)	Adsorption/soil Koc: 4898
Known distribution to environmental compartments	Ultimate destination of the product: water.

### 12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).  
This substance is not considered to be very persistent and very bioaccumulating (vPvB)

### 12.6 Other adverse effects

#### Ecotoxicity assessment

Acute aquatic toxicity	Harmful to aquatic life.
Chronic aquatic toxicity	No adverse chronic effect observed up to and including the threshold of 1 mg/l.

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### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Product disposal: Avoid release to the environment. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

Advice on cleaning and disposal of packaging: Cleaning is not required prior to disposal. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Dispose of in accordance with local regulations.

### SECTION 14: TRANSPORT INFORMATION

#### Transport information according to ADR/RID/IMDG/ICAO/IATA

##### 14.1 UN Number

ADR/ RID(Land),IMDG(Sea),  
IATA/ICAO (Air) : Not classified.

##### 14.2 UN proper shipping name

ADR/ RID(Land),IMDG(Sea),  
IATA/ICAO (Air) : Not classified.

##### 14.3 Transport hazard class(es)

ADR/ RID(Land),IMDG(Sea),  
IATA/ICAO (Air) : Not classified.

##### 14.4 Packing group

ADR/ RID(Land),IMDG(Sea),  
IATA/ICAO (Air) : Not classified.

##### 14.5 Environmental hazards

ADR/ RID(Land),IMDG(Sea),  
IATA/ICAO (Air) : Not classified.

##### 14.6 Special precautions for user

Not available.

##### 14.7 Transport in bulk according to annex II of Marpol and the IBC Code

Not available.

##### 14.8 Additional transport information

ADR, RID, IMDG, IATA, ADN/ADNR: Not regulated.

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

### SECTION 15: REGULATORY INFORMATION

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance/mixture

Hazard symbol:



Irritant

Risk phrases:

R36 Irritating to eyes.

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### Safety phrases:

R43 May cause sensitisation by skin contact.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28 After contact with skin, wash immediately with soap and water.

S39 Wear eye/face protection.

### 15.2 Chemical safety assessment

A chemical safety assessment has been carried out for this substance.

## SECTION 16: OTHER INFORMATION

### 16.1 Changes since the previous version

Not applicable.

### 16.2 Abbreviations and acronyms used

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
EC (number):	European Community (number)
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Code for Dangerous Goods
IUPAC:	International Union of Pure and Applied Chemistry
PBT:	Persistent, Bioaccumulative and Toxic substance
RID:	Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT:	Specific Target Organ Toxicity
UN (number):	United Nations (number)
vPvB:	very Persistent and very Bioaccumulative

### 16.3 Key literature references/sources for data

European Chemicals Agency.

<https://www.echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database/>

### 16.4 Method of classification in case of mixture

Not applicable.

### 16.5 Relevant Hazard statements and/or precautionary statements

For information on hazard and/or precautionary statements refer to section 2 up to and including section 15.

### 16.6 Training advisement

Not available

### 16.7 Notice for user(s)

The information provided in this MSDS has been established in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015, amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council, on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation

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(EC) No 1488/94, as well as Council Directive 76/769/EEC and Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC of the Commission.

This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information has been compiled from sources considered to be dependable and is accurate to the best of the FSA NV's knowledge. However, the information is provided without any representation or warranty, expressed or implied regarding its accuracy or correctness. FSA NV cannot assume responsibility for adverse events which may occur in the use and/or misuse of this product and expressly disclaims liability for loss, damage and/or expense arising out of or in any way connected with the handling, storage, use and/or disposal of this product.

## 16.8 Department issuing MSDS

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