

Pyridoxine Hydrochloride

0411604

Version 3.1

Revision Date 28.11.2017

Date of last issue: 23.11.2015

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

1.1 Product identifier

Trade name : Pyridoxine Hydrochloride

REACH Registration Number : 01-2120113157-67-0000

Substance name : 3,4-Pyridinedimethanol, 5-hydroxy-6-methyl-, hydrochloride (1:1)

CAS-No. : 58-56-0

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

Use of the Substance/Mixture : For the fortification of foods, Additive for animal nutrition to be used in feed, Ingredient for pharmaceutical products

1.3 Details of the supplier of the safety data sheet

Company : DSM Nutritional Products (UK) Ltd.
Heanor Gate
αGB061EI0017
Delves Road
GB-DE75 7SG Heanor

Telephone : +441773536500

Telefax : +441773536600

E-mail address of person responsible for the SDS : sds.nutritionalproducts@dsm.com

1.4 Emergency telephone number

+44 1865 407333

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Serious eye damage, Category 1 H318: Causes serious eye damage.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H318 Causes serious eye damage.

Precautionary statements : **Prevention:**
P280 Wear eye protection/ face protection.

Response:
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

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2.3 Other hazards

Risk of dust explosion.

SECTION 3: Composition/information on ingredients

Synonyms : vitamin B6 hydrochloride

Brief description of the product : Substance

Molecular formula : C₈-H₁₁-N-O₃ .Cl-H

3.1 Substances

Hazardous components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
pyridoxine hydrochloride	58-56-0 200-386-2	>= 90 - <= 100

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
Continue rinsing eyes during transport to hospital.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No specific symptoms known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water

Foam

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Formation of corrosive gases by combustion.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Consider dust explosion hazard.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas.
Use personal protective equipment.
Ensure adequate ventilation.
Avoid dust formation.
Avoid breathing dust.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust.

6.4 Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Take precautionary measures against static discharges.

Hygiene measures : Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : To maintain product quality, do not store in heat or direct sunlight.

Keep container tightly closed and dry.

7.3 Specific end use(s)

Specific use(s) : Not applicable

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
pyridoxine hydrochloride	58-56-0	TWA	2 mg/m ³	DSM Internal Limit

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material : for example nitrile rubber
: Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

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

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : powder
Colour : white
Odour : odourless
Odour Threshold : No information available.
pH : 2.4 - 3.0 (5%)
(as aqueous solution)
Melting point/range : ca. 205 °C
with decomposition
Boiling point/boiling range : not determined
Flash point : Not applicable
Flammability (solid, gas) : May form combustible dust concentrations in air.
Vapour pressure : < 0.001 hPa (25 °C; calculated (citation from literature))
Relative vapour density : Not applicable
Density : not determined

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Water solubility	: ca. 200 g/l (20 °C)
Solubility in other solvents	: Ethanol: slightly soluble Diethylether: insoluble Chloroform: insoluble Propylene glycol: soluble
Partition coefficient: n-octanol/water	: log Pow -4.32 (calculated (citation from literature))
Auto-ignition temperature	: No self ignition observed in the Grewer oven at temperatures below melting point.
Thermal decomposition	: Decomposes on heating. Potential for exothermic hazard
Explosive properties	: Not explosive
Oxidizing properties	: No data available

9.2 Other information

Combustibility index for deposited dust	: 2 (21 °C) : 2 (100 °C)
Dust explosion class	: St(H)1 (Milled sample, Median value of the tested sample 0.033 mm, Loss on drying 0.4 %; The value was determined in the modified Hartmann tube.)
Minimum ignition energy	: 10 - 30 mJ (Milled sample, Median value of the tested sample 0.033 mm, Loss on drying 0.4 %, EN 13821) The Minimum ignition energy (MIE) of a dust/air mix depends on the particle size the water content and the temperature of the dust. The finer and the dryer the dust the lower the MIE. : General remark: The indicated dust explosion characteristics are only valid for this product and are sensitive to the sample's parameters.
Powder volume resistivity	: ca. 2E+12 Ohmm (Test performed using a similar product., Median value of the tested sample 0.189 mm, Loss on drying 0.3 %) The material can accumulate static charge and can therefore cause electrical ignition.
Minimum ignition temperature of a dust/air mix	: 510 °C (Median value of the tested sample 0.050 mm) determined in the BAM oven
Molecular weight	: 205.64 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

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Dust may form explosive mixture in air.

10.4 Conditions to avoid

Heat

10.5 Incompatible materials

Strong acids and strong bases
Strong oxidizing agents

10.6 Hazardous decomposition products

Hydrogen chloride
Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- | | |
|---|---|
| Acute oral toxicity | : LD50 (Rat): > 6,600 mg/kg
: LD50 (Mouse): > 6,000 mg/kg |
| Skin irritation | : No skin irritation (In vitro study, OECD Test Guideline 439)
: May cause skin irritation in susceptible persons. |
| Eye irritation | : Risk of serious damage to eyes. (Bovine cornea, OECD Test Guideline 437, 4 h) |
| Sensitisation | : Did not cause sensitisation on laboratory animals. (Guinea pig, Maximisation Test, OECD Test Guideline 406)
: no photoallergenic skin reaction (Guinea pig, CTFA Test Guideline) |
| Genotoxicity in vitro | : not mutagenic (Ames test, OECD Test Guideline 471)
: not genotoxic (Micronucleus test, OECD Test Guideline 487) |
| Carcinogenicity | : No indication for carcinogenicity known. |
| Reproductive toxicity | : Reduction of fertility
LOAEL: 125 mg/kg body weight (Rat, male) |
| Teratogenicity | : Did not show teratogenic effects in animal experiments.
(Rat, Oral) |
| STOT - single exposure (Acute exposure) | : The substance or mixture is not classified as specific target organ toxicant, single exposure. |

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- STOT - repeated exposure : This information is not available.
- Experience with human exposure : RDA (Recommended Daily Allowance) ca. 2.0 mg
- Experience with human exposure: Skin contact : May be slightly irritating, especially on damp skin.
- Experience with human exposure: Ingestion : Chronic overdose may provoke the following symptoms:
: Reversible peripheral sensory neuropathy
- Aspiration toxicity : No aspiration toxicity classification

SECTION 12: Ecological information

12.1 Toxicity

- Toxicity to fish : Oncorhynchus mykiss (rainbow trout)
LC50 (96 h) > 100 mg/l
(OECD Test Guideline 203)
- Toxicity to daphnia and other aquatic invertebrates : Daphnia magna (Water flea)
EC50 (48 h) > 100 mg/l
(nominal concentration)
(OECD Test Guideline 202)
- Toxicity to algae : Desmodesmus subspicatus (green algae)
EbC50 (72 h) 5.3 mg/l
(OECD Test Guideline 201)
: EbC0 (72 h) 1.2 mg/l

12.2 Persistence and degradability

- Biodegradability : Readily biodegradable.
94 % (28 d)
(OECD Test Guideline 301E)

12.3 Bioaccumulative potential

- Partition coefficient: n-octanol/water : log Pow -4.32 (calculated (citation from literature))

12.4 Mobility in soil

- Distribution among environmental compartments : No data available

12.5 Results of PBT and vPvB assessment

- Assessment : The substance does not fulfill the PBT criteria.
: The substance does not fulfill the vPvB criteria.

12.6 Other adverse effects

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Additional ecological information : Toxic to aquatic organisms.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Discharge into the environment must be avoided.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Dispose of as unused product.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

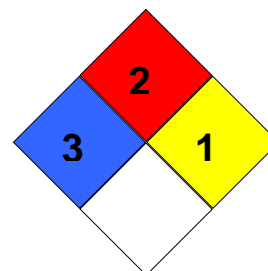
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

NFPA Classification : Health hazard: 3
Fire Hazard: 2
Reactivity Hazard: 1



15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: Other information**Full text of other abbreviations**

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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