

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Niacin

5010837

Version 2.0

Revision Date 05.08.2013

Print Date 12.11.2013

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Niacin
Substance name : nicotinic acid
CAS-No. : 59-67-6

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

Use of the Substance/Mixture : For the fortification of foods

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 : sds.nutritionalproducts@dsm.com
Responsible/issuing person

1.4 Emergency telephone number

+441773536623 / +41628662314

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2 H319: Causes serious eye irritation.

Classification (67/548/EEC, 1999/45/EC)

Irritant R36: Irritating to eyes.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

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P337 + P313
lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Hazardous components which must be listed on the label:
59-67-6 nicotinic acid

2.3 Other hazards

Risk of dust explosion.

3. Composition/information on ingredients

Synonyms : Pyridine-3-carboxylic acid
Vitamin PP
3-Pyridinecarboxylic acid

Brief description of the product : Substance

Molecular formula : C6 H5 N O2

3.1 Substances

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
nicotinic acid	59-67-6 200-441-0	Xi; R36	Eye Irrit. 2; H319	>= 99,5

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.
If symptoms persist, call a physician.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

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.

4.2 Most important symptoms and effects, both acute and delayed

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Symptoms : Skin contact may provoke the following symptoms:, temporary redness, temporary itching

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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 firefighting : None known.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Consider dust explosion hazard.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.
Ensure adequate ventilation.
Avoid dust formation.
Avoid breathing dust.

6.2 Environmental precautions

Try to prevent the material from entering drains or water courses.

6.3 Methods and materials 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.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.

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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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Protect against light.
Protect from humidity.
: Keep container tightly closed and dry.
Storage temperature : < 25 °C

7.3 Specific end use(s)

Specific use(s) : not applicable

8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
Hand protection : Glove 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.
Eye protection : Safety glasses with side-shields
Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and at the end of workday.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : crystalline, powder
Colour : white

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Odour	: odourless
Odour Threshold	: No information available.
pH	: 3,4 (10 g/l, 20 °C)
Melting point/range	: 234 - 237 °C
Boiling point/boiling range	: not determined
Flash point	: 193 °C
Flammability (solid, gas)	: not highly flammable (Method: Flammability (solids))
Vapour pressure	: 0,1 hPa (at 50 °C; calculated value)
Relative vapour density	: not applicable
Density	: 1,47 g/cm ³ (at 20 °C)
Water solubility	: 14 g/l (20 °C) 100 g/l (100 °C)
Solubility in other solvents	: Ethanol: 12,5 g/l (25 °C) Diethylether: practically insoluble Solutions of alkali hydroxides: easily soluble
Partition coefficient: n-octanol/water	: log Pow -0,59 (25 °C)
Auto-ignition temperature	: No self ignition observed in the Grewer oven at temperatures below melting point.
Ignition temperature	: 580 °C (DIN 51794)
Thermal decomposition	: Not relevant
Explosive properties	: Not explosive
Oxidizing properties	: no data available

9.2 Other information

Combustibility index for deposited dust	: 5 (ca. 21 °C)
	: 5 (100 °C)
Dust explosion properties	: KSt value: ca. 236 m.bar/s (Median value of the tested sample 0,025 mm)
Dust explosion class	: St2 (Median value of the tested sample 0,025 mm)
Maximum explosion overpressure	: 8,3 bar (Median value of the tested sample 0,025 mm)
Minimum ignition energy	: 1 - 3 mJ (Median value of the tested sample 0,0219 mm, Loss on drying 0,26 %) 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. 3E+12 Ohmm (Product sample, Median value of the

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tested sample 0,35 mm, Loss on drying 0,2 %
The material can accumulate static charge and can therefore cause electrical ignition.

Minimum ignition temperature of a dust/air mix : 430 °C
determined in the BAM oven

Molecular weight : 123,11 g/mol

Dissociation constant : pKa 4,85

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

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

No decomposition if used as directed.

11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity : LD50 (mouse): 3 010 mg/kg
: LD50 (rat): > 5 000 mg/kg
(OECD Test Guideline 401)

Acute inhalation toxicity : LC50 (rat, 4 h): > 3,8 mg/l
(OECD Test Guideline 436)
: LCLo (lowest lethal concentration) (rat, 4 h): >= 3,8 mg/l
(OECD Test Guideline 436)

Acute dermal toxicity : LD50 (rat): > 2 000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation : No skin irritation (rabbit, OECD Test Guideline 404)

|| : May be slightly irritating, especially on damp skin.

Serious eye damage/eye : Eye irritation (rabbit, OECD Test Guideline 405)

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irritation

Respiratory or skin sensitisation : Did not cause sensitisation on laboratory animals. (guinea pig, Maximisation Test, OECD Test Guideline 406)

Germ cell mutagenicity

Genotoxicity in vitro : not mutagenic, not genotoxic (Various test systems)

Genotoxicity in vivo : not genotoxic (Various test systems)

Carcinogenicity

: (mouse)
Did not show carcinogenic effects in animal experiments.

Teratogenicity

: not teratogenic
not embryotoxic
NOAEL: 1 000 mg/kg bw/d (rat, Oral)

STOT - single exposure

: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

: NOAEL (Oral, rat) : 50 mg/kg bw/d
Subacute toxicity study (28 days)
(OECD Test Guideline 407)

Aspiration toxicity

: No aspiration toxicity classification

Further information

: May cause irritation of respiratory tract.

Experience with human exposure

: RDA (Recommended Daily Allowance) 13 - 20 mg

Experience with human exposure: Skin contact

: Skin: temporary redness, temporary itching

12. Ecological information

12.1 Toxicity

Toxicity to fish : Oncorhynchus mykiss (rainbow trout)
LC50 (96 h) 520 mg/l
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates : Daphnia magna (Water flea)
EC50 (48 h) 77 mg/l
(OECD Test Guideline 202)

Toxicity to algae : Desmodesmus subspicatus (green algae)
EbC50 (72 h) 90 mg/l
(OECD Test Guideline 201)

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Toxicity to bacteria : Pseudomonas putida
EC50 (16 h) 120 mg/l
(nominal concentration)

12.2 Persistence and degradability

Biodegradability : Readily biodegradable.
100 % (14 d)
(OECD Test Guideline 301E)

12.3 Bioaccumulative potential

Partition coefficient: n-
octanol/water : log Pow -0,59 (25 °C)

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

Additional ecological
information : There is no data available for this product.

13. Disposal considerations

13.1 Waste treatment methods

Product : 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.

14. Transport information

14.1 UN number

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.2 Proper shipping name

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ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.3 Transport hazard class

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.4 Packing group

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.5 Environmental hazards

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.6 Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

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

no data available

15. Regulatory information

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

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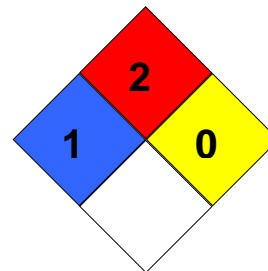
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NFPA Classification : Health hazard: 1
Fire Hazard: 2
Reactivity Hazard: 0



15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R36 Irritating to eyes.

Full text of H-Statements referred to under sections 2 and 3.

H319 Causes serious eye irritation.

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.

Abbreviations: 67/548/EEC= Dangerous Substances Directive. 1999/45/EC= Dangerous Preparations Directive. Regulation (EC) No. 1272/2008= Regulation on classification, labelling and packaging of substances and mixtures. DNEL= Derived No-Effect Level. PNEC= Predicted No-Effect Concentration. NFPA= National Fire Protection Association (USA). IATA= International Air Transport Association. IMDG= International Maritime Dangerous Goods. RID= International Rule for Transport of Dangerous Substances by Railway; ADR= European Agreement concerning the International Carriage of Dangerous Goods by Road. TWA= Time Weighted Average. STEL= Short term exposure limit.