

Safety data sheet

Page: 1/6

BASF Safety data sheet according to 91/155/EEC

Date / Revised: 12.01.2004

Product: **Riboflavin High Flow 100**

Version: 1.1

(30214976/SDS_GEN_EU/EN)

Date of print 21.06.2005

1. Substance/preparation and company identification

Riboflavin High Flow 100

Use: Vitamin

Company:

BASF Aktiengesellschaft

Fine Chemicals Division

67056 Ludwigshafen, Germany

E-mail address: basis-msds-label.me-qr@basf-ag.deEmergency information:

Fire brigade BASF Ludwigshafen

Telephone: +49-621-60-43333

Telefax number: +49-621-60-92664

2. Composition/information on ingredients

Chemical nature

Vitamin

riboflavin

CAS Number: 83-88-5

EC-Number: 201-507-1

3. Hazard identification

No particular hazards known.

4. First-aid measures

General advice:

Remove contaminated clothing.

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If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink plenty of water.

5. Fire-fighting measures

Suitable extinguishing media:

water spray, dry extinguishing media, foam

Specific hazards:

carbon dioxide, nitrous gases, cyanides

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions:

Avoid dust formation.

Environmental precautions:

Do not empty into drains.

Methods for cleaning up or taking up:

For small amounts: Sweep/shovel up.

For large amounts: Sweep/shovel up.

Dispose of absorbed material in accordance with regulations.

7. Handling and storage

Handling

Protection against fire and explosion:

Avoid dust formation. Take precautionary measures against static discharges. If exposed to fire, keep containers cool by spraying with water. The product is capable of dust explosion.

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Storage

Further information on storage conditions: Keep container tightly closed and in a well-ventilated place. Protect against heat. Protect against moisture. Protect contents from the effects of light.

8. Exposure controls and personal protection

Components with workplace control parameters

none

Personal protective equipment

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Particle filter EN 143 Type P1, low efficiency, (solid particles of inert substances).

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other

Supplementary note: The specifications are based on own tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Eye protection:

Safety glasses with side-shields (frame goggles) (EN 166)

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Form: powder, crystalline
Colour: yellow to orange
Odour: product specific, faint specific odour

pH value: 5,5 - 7,2
(0,07 g/l, 20 °C)

melting point (decomposition): approx. 290 °C
The substance / product decomposes.

Bulk density: approx. 300 kg/m³

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Solubility in water:

70 mg/l
(20 °C)

Partitioning coefficient n-octanol/water (log Pow): -1,46 (measured)

10. Stability and reactivity

Thermal decomposition: approx. 290 °C

Substances to avoid:

alkaline reactive substances, reducing agents

Hazardous reactions:

Dust explosion hazard.

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological information

LD50/oral/rat: > 10.000 mg/kg (Guideline 92/69/EEC, B.1)

LC50/by inhalation/rat: > 5,4 mg/l / 4 h(BASF-Test)

Virtually nontoxic after a single ingestion.

Virtually nontoxic by inhalation.

Primary skin irritation/rabbit: non-irritant (Draize test)

Primary irritations of the mucous membrane/rabbit: non-irritant (Draize test)

Not irritating to the skin.

Not irritating to the eyes.

Further information:

No mutagenic effect was found in various tests with microorganisms and mammalian cell culture.

The substance was not mutagenic in studies with mammals.

12. Ecological information

Ecotoxicity

Toxicity to fish:

OECD Guide-line 203 static

Brachydanio rerio/LC50 (96 h): > 10.000 mg/l

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Tested above maximum solubility. The details of the toxic effect relate to the nominal concentration.

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Microorganisms/Effect on activated sludge:

DIN 38412 Part 27 (draft) aerobic

Pseudomonas putida/EC50 (0,5 h): > 10.000 mg/l

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Persistence and degradability

Elimination information

Test method: OECD Guideline 301 F (aerobic), activated sludge, domestic

Method of analysis: BOD of the ThOD

Degree of elimination: 90 - 100 % (28 d)

Assessment: Readily biodegradable (according to OECD criteria).

Bioaccumulation potential

Accumulation in organisms is not to be expected.

13. Disposal considerations

Observe national and local legal requirements.

14. Transport information

Not classified as hazardous under transport regulations (ADR RID ADNR IMDG/GGVSee ICAO/IATA)

15. Regulatory information

Regulations of the European union (Labelling) / National legislation/Regulations

EC-Number: 201-507-1

not subject to labelling

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Other regulations

16. Other information

Vertical lines in the left hand margin indicate an amendment from the previous version.

The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties. Recipients of our product must take responsibility for observing existing laws and regulations.