

Safety data sheet

Date of issue: November 2, 2010

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

Identification of the product:

Name: "Ninprint, ninhydrin spray", article number B-78500 (250 ml)

Use of substance/preparation:

Amino acid reagent in a spray can

Company/undertaking identification:

Supplier: BVDA International b.v., Postbus 2323, 2002 CH HAARLEM, the Netherlands

Telephone: +31-23-5424708 Fax: +31-23-5322358 e-mail: info@bvda.nl

2. Hazard identification

Extremely flammable. Irritating to skin. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Vapours may cause drowsiness and dizziness.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition – No smoking.

Classification system: the classification is in line with current EC lists. It is expanded, however, by the information from technical literature and by information furnished by supplier companies.

3. Composition/information on ingredients

Chemical characterization: Mixture of ninhydrin, ethanol, MTBE, aliphatic hydrocarbons and propane / butane (propellant)

Dangerous compounds:

	CAS-Number	% w/w	Symbol	R-phrases	EC-Index-No.
Aliphatic hydrocarbons	--	40-60	Xn, F+, N	12-51/53-65-66-67	--
MTBE	1634-04-4	5-10	F, Xi	11-38	603-181-00-X
Propane / butane	61641-74-5	30-45	F+	12	--
Ethanol	64-17-5	<5	F	11	603-002-00-5
Ninhydrin	485-47-2	<1	Xn	22-36/37/38	--

(Full text of R-phrases in heading 16)

4. First aid measures

After inhalation: fresh air, consult physician if symptoms persist.

After skin contact: wash off with plenty of water and soap. Remove contaminated clothing.

After eye contact: rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Call in ophthalmologist.

After swallowing: rinse mouth, do not induce vomiting, call in physician.

The use of alcoholic beverages intensify the toxicity.

5. Fire fighting measures

Suitable extinguishing media: CO₂ (carbon dioxide), alcohol-resistant foam, powder.

Unsuitable extinguishing media: full water jet.

Special risks: combustible. Forms explosive mixtures with air even at ambient temperatures. Development of hazardous combustion gases or vapours possible in the event of fire (CO, carbon monoxide).

Special protective equipment for fire fighting: do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

6. Accidental release measures

Person-related precautionary measures: avoid substance contact. Do not breathe spray. Wear protective clothing. Keep unprotected persons away. Use only in well ventilated areas.
 Environmental protection measures: do not allow to enter the sewage system, surface water, or ground water.
 Procedures for cleaning/absorption: ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

Information for safe handling: ensure good ventilation / exhaustion at the workplace.

Information about protection against explosions and fires: pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition – No smoking.

Storage:

Store in a cool well-ventilated place. Observe official regulations on storing packagings with pressurized containers.

Information about storage in one common storage facility: store separated from strong acids and strong oxidizing agents.

8. Exposure controls/personal protection

Specific control parameter:

MAK Germany:	Aliphatic hydrocarbons:	600 ppm;
	MTBE:	50 ppm;
	Propane:	1000 ppm;
	Butane:	600 ppm

Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: recommended when vapours/aerosols are generated. Filter A (acc. To DIN 3181) for vapours of organic compounds.

Eye protection: required (wear tight fitting safety goggles).

Hand protection: required (glove material: nitrile rubber, layer thickness: 0.40 mm, breakthrough time: >480 min.)

Industrial hygiene: immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with the substance.

9. Physical and chemical properties

Form: aerosol

Colour: according to product specification

Odour: characteristic

pH value (20°C): not available

Melting temperature: not determined

Boiling temperature/range: not applicable, as aerosol

Self-inflammability: product is not self-igniting

Flash point: not applicable, as aerosol

Danger of explosion: product is not explosive. However the formation of explosive vapour-/ air mixtures is possible

Critical values for explosion:

Lower: 1.4 Vol% Upper: 10.0 Vol%

Vapour pressure (20°C): 2.5 bar

Density (20°C): 0.613 g/cm³

Solubility in water (20°C): not miscible or difficult to mix

VOC (volatile organic compounds) (20°C): 610 g/l

10. Stability and reactivity

Conditions to avoid / thermal decomposition: no decomposition if used according to specifications

Substances to avoid: strong oxidising agents, strong acids, water

Dangerous reactions: forms explosive mixtures with air even at ambient temperatures

Hazardous decomposition products: in case of fire, see chapter 5

11. Toxicological information

After inhalation: irritations of the mucous membranes, coughing, and dyspnoea.

After skin contact: irritations

After eye contact: irritations

Further data: further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

12. Ecological information

Ecotoxic effects: quantitative data on the ecological effect of this product is not available.

Further ecological data: water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow to enter drinking water supplies, sewage systems, groundwater or soil.

13. Disposal considerations

Product:

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies, which will advise you on how to dispose of special waste.

Packaging:

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. Transport information

Land transport ADR/RID and GGVS/GGVE

GGVS/GGVE Class: 2 Number/Letter: 5F

ADR/RID Class: 2 Number/Letter: 5F

UN-Number: 1950

Designation of goods: AEROSOLS, N.O.S.

Remarks: "Limited quantities"

Maritime transport IMDG/GGVSea

IMDG/GGVSea Class: 2

UN-Number: 1950 EMS-Number: F-D, S-U

Marine pollutant: No

Correct technical name: AEROSOLS, N.O.S.

Remarks: "Limited quantities"

Air transport ICAO-IATA and IATA-DGR

ICAO/IATA Class: 2.1

UN-/ID-Number: 1950

Label: 2.1

Correct technical name: AEROSOLS, FLAMMABLE, N.O.S.

15. Regulatory information

Labelling according to EC Directives:

The product has been classified and labelled in accordance with EU Directives and the Ordinance on Hazardous Materials (German GefStoffV). (2001/58/EC and 94/69/EC (Note 4))

Symbols: F+, N

Description: extremely flammable, dangerous to the environment

R-phrases: 12-38-52/53-67 "Extremely flammable. Irritating to skin. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Vapours may cause drowsiness and dizziness."

S-phrases: 9-16-23-24-51 "Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. Do not breathe spray. Avoid contact with skin. Use only in well-ventilated areas."

Special labelling of certain preparations:

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition – No smoking.

16. Other information

Text of any R-phrases referred to under heading 3:

11	Highly flammable.
12	Extremely flammable.
22	Harmful if swallowed.
36/37/38	Irritating to eyes, respiratory system and skin.
38	Irritating to skin.
51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
65	Harmful: may cause lung damage if swallowed.
66	Repeated exposure may cause skin dryness or cracking.
67	Vapours may cause drowsiness and dizziness.

The information contained herein characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.