# Safety Data Sheet

## according to Directive 1907/2006/EC (REACh) and 453/2010/EU



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

### 1.1 Product identifier

| | |
|---|---|
| REF | 814203.NV |
| Product name | Ninhydrin spray reagent 5 x 100 mL, np |
| | 5 x 100 mL Ninhydrin spray reagent (OEM) |

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

**Relevant identified uses**
Product for analytical use.
Exposure Scenario Classification according REACh, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
The exposure scenario is integrated into sections 1-16.
**Uses advised against**
not described

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

**Manufactured by:**
MACHEREY-NAGEL GmbH & Co. KG
Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY
Tel.: +49 2421 969 0 E-mail: msds@mn-net.com

### 1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.
DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

**100 mL Ninhydrin spray reagent (OEM)**

*Directive 1999/45/EC*

Symbols R 11

F

*CLP Directive 1272/2008/EC*

GHS pictograms

GHS02

Signal word DANGER

| Hazard identification | Hazard classes/categories |
|---|---|
| H225 | Flammable Liquid cat. 2 |

### 2.2 Label elements

According 1999/45/EC small amounts of harmful and highly flammable preparations/mixtures have partly/completely exemption from labelling (no symbols F, O, Xn, Xi, N and no R and S phrases are necessary) until **25-125 mL|g** .

According **CLP (GHS)** inner packages must be only labelled with symbol(s) and product identificator (EU 1272/2008 Annex I - 1.5.1.2). Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** or **125 g** (EU 1272/2008 Annex I - 1.5.2).

**100 mL Ninhydrin spray reagent (OEM)**

*Directive 1999/45/EC*

Symbols:

F
R 11
Highly flammable.

S 16-7
Keep away from sources of ignition — No smoking. Keep container tightly closed.

*CLP Directive 1272/2008/EC*
GHS pictograms:

GHS02

Signal word: DANGER

### 2.3 Other hazards

**Possible Hazards from physicochemical Properties**
According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC, 1999/45/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit.
An individual package has considerably less hazardous potential.

**Information pertaining to particular Risks to Human and possible Symptoms**
—

**Information pertaining to particular Risks to the Environment**
—

**Other Hazards**
— Flammable properties. Vapour forms explosive mixtures with air.

## SECTION 3: Composition/Information on Ingredients

### 3.1 Substances or 3.2 Mixtures

**100 mL Ninhydrin spray reagent (OEM)**

| | | | |
|---|---|---|---|
| Chemical: | *ninhydrin* | | CAS No.: 485-47-2 |
| Concentration: | < 1,00 % | | |
| Formula: | $C_9 H_6 O_4$ | | |
| Pseudonym: | 2,2-dihydroxy-1H-indene-1,3(2H)-dione | | |
| EC No.: | 207-618-1 | | |
| RTECS: | NK5425000 | MFCD: | 00003791 |
| TSCA Inventory: | listed | | |
| KE No.: | KE-10839 | | |
| acc. 1999/45/EC: | - | acc. CLP (GHS): | not necessary |

| | | | |
|---|---|---|---|
| Chemical: | *ethanol* (denatured with MEK, acc. 3199/93/EC) | | CAS No.: 64-17-5 |
| Concentration: | 90 - 98 % | | |
| Formula: | $C_2 H_6 O$ | | |
| Pseudonym: | ethyl alcohol, methylated spirit | | |
| REACH Reg. No.: | 01-2119457610-43-xxxx | | |
| EC No.: | 200-578-6 | Indice No.: | 603-002-00-5 |
| RTECS: | KQ6300000 | MFCD: | 00003568 |
| TSCA Inventory: | listed | | |
| KE No.: | KE-13217 | | |
| acc. 1999/45/EC: | R 11 | acc. CLP (GHS): | H225 |

### 3.3 Remarks

List of R, H and P phrases: see chapter 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

4.1.1 **After SKIN Contact**
Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

4.1.2 **After EYE Contact**
After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

4.1.3 **After INHALATION of Vapours**
After inhalation of foam or vapour fresh air should be inhaled. Keep airways free.

4.1.4 **After ORAL Intake**
After oral intake lots of water should be drunk after it has been ingested.

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

—

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

No additionally recommendations.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

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

Formation of hazardous and caustic vapour-air mixtures possible.

### 5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic.

### 5.4 Additional Information

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## SECTION 6: Accidental release measures

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

Do not breathe vapours. Regular staff training is necessary.

### 6.2 Environmental precautions

not necessary

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

Bind any escaping liquid with inert absorbent. Collect small amounts of leaked liquid and flush with water into drains.

### 6.4 Reference to other sections

—

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product.

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

The original product package of MACHEREY-NAGEL allows a safe storage.
Storage class (German chemical industry): see chapter 12.1

7.2.1 **Requirements for Stock Rooms and Containers**
Keep original product packages tightly closed during handling and storage.

### 7.3 Specific end use(s)

—

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**100 mL Ninhydrin spray reagent (OEM)**

Chemical: *ninhydrin* CAS No.: 485-47-2

Chemical: *ethanol* CAS No.: 64-17-5

DNEL: $950_{inh-sys}$ mg/m³
DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): 500 mL/m³ / 960 mg/m³
A/a aveoles passing, E/e respirable, G total

Short-term exposure factor: 2 (II), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 500 ppm / 960 mg/m³
NIOSH: TWA 1000 ppm / 1900 mg/m³
OSHA: TWA 1000 ppm / 1900 mg/m³

### 8.2 Exposure controls

The highest level of cleanliness must be maintained at the workplace.

**8.2.1 Respiratory Protection**
Only if additional recommendations in test instruction or packing insert.

**8.2.2 Hand Protection**
Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC (f.ex. from Ansell or KCL). Use for short times chemical resistant latex or nitril gloves with code EN 374-3 level 1.

**8.2.3 Eye Protection**
Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

**8.2.4 Skin Protection**
Not necessary.

**8.2.5 Personal Hygiene**
Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**100 mL Ninhydrin spray reagent (OEM)**

Appearance : - Color : - Odor : -

### 9.2 Other information

**Relevant Properties of Substance Group**
—

**9.2.1**

- Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity
No data available

### 10.2 Chemical stability
No known instability.

### 10.3 Possibility of hazardous reactions
No data available.

### 10.4 Conditions to avoid
Or when indicated in packing insert.

### 10.5 Incompatible materials
Not necessary.

### 10.6 Hazardous decomposition products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Following information is valid for pure substances.** Quantitative data on the toxicity of this product are not available.

**100 mL Ninhydrin spray reagent (OEM)**

Chemical: *ninhydrin* CAS No.: 485-47-2
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-10839
$LD50_{orl\ rat}$ : 600 mg/kg
$LC\_Low_{orl\ rat}$ : 250 mg/kg

Chemical: *ethanol* CAS No.: 64-17-5
TSCA Inventory: listed California Proposition 65 List: listed
ACGIH: 1000 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed
Japan PDSCL: not listed Japan ISHL: Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217
$LD50_{orl\ rat}$ : 6200 mg/kg
$LC\_Low_{ihl\ gpg}$ : 21.9 g/m³
$LC\_Low_{orl\ hmn}$ : 1400 mg/kg
$LC50_{ihl\ mouse}$ : $39_{4h}$ g/m³
$LC50_{ihl\ rat}$ : $20_{10h}$ g/m³
$LD50_{drm\ rbt}$ : 20 000 mg/kg
$LD50_{oral\ mouse}$ : 3450 mg/kg

TRGS 905 (DE): K5, M5, $R_F$ C

## SECTION 12: Ecological information

### 12.1 Toxicity

**Following information is valid for pure substances.**

**100 mL Ninhydrin spray reagent (OEM)**

Chemical: *ninhydrin* CAS No.: 485-47-2
WGK (DE): 2
Storage class (VCI): 12

Chemical: *ethanol* CAS No.: 64-17-5
$PNEC_{(sweet\ water)}$ : 0.96 mg/L
PNEC = Predicted No Effected Concentration
$LC50_{daphnia\ magna/48h}$ : >100 mg/L
$LC50_{pimephales\ promelas/96h}$ : 13400 - 15100 mg/L
$LC50_{leuciscus\ idus/96h}$ : $8140_{48h}$ mg/L
$LC50_{fish/96h}$ : 13 g/L
$EC50_{daphnia/48h}$ : 9.3-14.2 g/L
$IC50_{scenedesmus\ quadricauda/72h}$ : $5000_{7d}$ mg/L
$EC10_{pseudomonas\ putita/16h}$ : EC5: 6500 mg/L
WGK (DE): 1 WGK No.: 0096
Dispersion coefficient (o-w): -0.31
Storage class (VCI): 3

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

no data available

### 12.6 Other adverse effects

no data available

## SECTION 13: Disposal considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

### 13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains.

## SECTION 14: Transport information

**14.1. UN number: 3316 14.2. UN proper shipping name: Chemical Kit**
**14.3. Class: 9 14.4. Packing group: II**

*Road transport*

| | | | |
|---|---|---|---|
| Classification code: | M11 | Tunnel restriction code: | E |
| Limited Quantity: | acc. ADR 3.3.1/251: see LQ in Alternative transport labelling | | |

*Air transport*

| | | | |
|---|---|---|---|
| PAX: | 960 | max. weight PAX: | 10 KG |
| CAO: | 960 | max. weight CAO: | 10 KG |

*Maritime transport*

| | | | |
|---|---|---|---|
| EmS: | F-A, S-P | Storage category: A | |

**Alternative transport labelling** follows:

**14.1 UN number: 1993 14.2 UN proper shipping name: Flammable liquid, n.o.s. (ethanol mixture)**
**14.3 Class: 3 14.4 Packing group: II**

*Road transport*

| | | | |
|---|---|---|---|
| Classification code: | F1 | | |
| Limited Quantity: | 1 L | Tunnel restriction code: | E |
| Excepted Quantity: | E 2 | Special instructions: | 640C |

*Air transport*

| | | | |
|---|---|---|---|
| PAX: | 353 | max. weight PAX: | 5 L |
| CAO: | 364 | max. weight CAO: | 60 L |

*Maritime transport*

| | | | |
|---|---|---|---|
| EmS: | F-E, S-E | Storage category: B | |

### 14.5 Environmental hazards

not necessary, contains only small quantities of hazardous substances

### 14.6 Special precautions for user

not necessary

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

not applicable

## SECTION 15: Regulatory Information

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

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013
German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011

### 15.2 Chemical safety assessment

**not necessary for these small amounts**

# Safety Data Sheet

## according to Directive 1907/2006/EC (REACh) and 453/2010/EU



## SECTION 16: Other Information

### 16.1 List of R, H and P phrases

**16.1.1 List of relevant R phrases**

| | |
|---|---|
| R11 | Highly flammable. |

**16.1.2 List of relevant H phrases**

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |

**16.1.3 List of relevant P phrases**

| | |
|---|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P233 | Keep container tightly closed. |
| P370+378 | In case of fire: Use all extinguisher media to extinguish. |
| P403+235 | Store in a well-ventilated place. Keep cool. |

### 16.2 Training Advice

Regular safety training.

### 16.3 Recommended Restriction on Use

Only for professional user.
An individual package of this product or test kit has a moderate hazardous potential.

### 16.4 Further Information

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.
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### 16.5 Sources of Key Data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated February 2015
SUVA .CH, Limits in air at work 2009, revised on 01.2009
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances

**Revisions/Updates**
*Reason for Revision: 2014-02 Corrected structure of sections acc. regulation 453/2010/EU, if necessary*
*2014-04 Adaptation of regulation 487/2013/EU*
*2016-03 Adaptation of regulation 1221/2015/EU*

You find our current versions of MSDS in Internet:
**http://www.mn-net.com/MSDS**