

Safety Data Sheet

according to Regulation (EC) No 1907/2006

22936-66 Silver 2 Reagent Solution Pillows

Revision date: 11.04.2016

Product code: 2293666

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Water analysis

1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH
Street: Willstätterstr. 11
Place: D-40549 Düsseldorf
Telephone: +49 (0)211 5288-383
e-mail: SDS@hach.com
Internet: www.de.hach.com
Responsible Department: HACH LANGE Ltd.
5, Pacific Way
Salford Manchester M50 1DL - United Kingdom
Tel. +44 (0) 161 872 1487 * Fax +44 (0) 161 848 7324
e-Mail: info-uk@hach.com

HACH LANGE Ltd.
Unit 1, Chestnut Road Western Industrial Estate
IRL-Dublin 12
Tel. +353 (0)1 4602522
e-Mail: info-ie@hach.com

1.4. Emergency telephone number:

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Reproductive toxicity: Repr. 1B

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

May cause respiratory irritation.

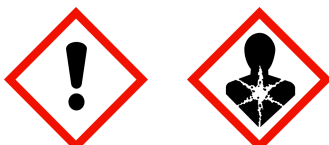
Causes serious eye irritation.

Causes skin irritation.

May damage the unborn child. Suspected of damaging fertility.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone

Signal word: Danger**Pictograms:**

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Hazard statements

H335	May cause respiratory irritation.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H360Df	May damage the unborn child. Suspected of damaging fertility.

Precautionary statements

P210	Keep away from heat. No Smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P370+P378	In case of fire: Use dry sand to extinguish.

Additional advice on labelling

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone			90,0-100,0 %
	212-828-1	606-021-00-7		
	Repr. 1B, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H360D H315 H319 H335			
9005-64-5	Tween 20 (Polysorbat)			1,0-10,0 %

Full text of H and EUH statements: see section 16.

Further Information

This product contains substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off contaminated clothing and shoes immediately.
Show this safety data sheet to the doctor in attendance.

After inhalation

Move to fresh air.
If symptoms persist, call a physician.

After contact with skin

Wash off immediately with plenty of water for at least 15 minutes.
If skin irritation persists, call a physician.

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After contact with eyes

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Obtain medical attention.

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

irritant effects, Cough, Shortness of breath, Vomiting, Diarrhoea

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours.

5.3. Advice for firefighters

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

In the event of fire, wear self-contained breathing apparatus.

Additional information

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Use mechanical handling equipment. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a dry and well-ventilated place.

Further information on storage conditions

Keep away from heat and sources of ignition.

Keep locked up or in an area accessible only to qualified or authorised persons.

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
872-50-4	1-Methyl-2-pyrrolidone	10	40		TWA (8 h)	WEL
		20	80		STEL (15 min)	WEL

Additional advice on limit values

None known.

8.2. Exposure controls

Appropriate engineering controls

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Protective and hygiene measures

Wash hands before breaks and at the end of workday.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin protection

Avoid contact with skin, eyes and clothing.

Respiratory protection

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	yellow
Odour:	amine-like
pH-Value (at 20 °C):	10,0

Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	185 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
Flash point:	88 °C

Flammability

Solid:	no data available
Gas:	no data available

Explosive properties

no data available

Lower explosion limits:	no data available
Upper explosion limits:	no data available

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Ignition temperature:	no data available
Auto-ignition temperature	
Solid:	no data available
Gas:	no data available
Decomposition temperature:	no data available
Oxidizing properties	
no data available	
Vapour pressure:	no data available
Density (at 20 °C):	1,10 g/cm ³
Bulk density:	not applicable
Water solubility: (at 20 °C)	soluble
Solubility in other solvents	
soluble	
Partition coefficient:	no data available
Viscosity / dynamic:	no data available
Viscosity / kinematic:	no data available
Flow time:	no data available
Vapour density:	no data available
Evaporation rate:	no data available
Solvent separation test:	no data available
Solvent content:	no data available

9.2. Other information

Solid content:	not applicable
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SECTION 10: Stability and reactivity

10.1. Reactivity

Vapour/air-mixtures are explosive at intense warming.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Strong oxidizing agents, Strong acids

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Acids, Oxidizing agents

10.6. Hazardous decomposition products

CO₂, CO, NO_x

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

No toxicology information is available.

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ATEmix calculated

ATE (inhalation vapour) 5,13 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone					
	oral	LD50 mg/kg	3600	Rat	IUCLID	
	dermal	LD50 mg/kg	8000	Rabbit	IUCLID	

Irritation and corrosivity

May cause eye and skin irritation.

Sensitising effects

No known effect.

Carcinogenic/mutagenic/toxic effects for reproduction

H360Df - May damage the unborn child. Suspected of damaging fertility.

STOT-single exposure

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT-repeated exposure

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

Aspiration hazard

No aspiration toxicity classification

Specific effects in experiment on an animal

No toxicology information is available.

Further information

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information
12.1. Toxicity

No information on ecology is available.

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone					
	Acute fish toxicity	LC50	832 mg/l	96 h	Lepomis macrochirus	IUCLID
	Acute algae toxicity	ErC50 mg/l	> 500	72 h	Scenedesmus subspicatus	IUCLID
	Acute crustacea toxicity	EC50 mg/l	ca. 4897	48 h	Daphnia magna	IUCLID

12.2. Persistence and degradability

Readily eliminated from water

12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone	-0,54 (25° C)

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12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

In accordance with local and national regulations.

List of Wastes Code - residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

List of Wastes Code - used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

List of Wastes Code - contaminated packaging

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

SECTION 14: Transport information**Land transport (ADR/RID)****Other applicable information (land transport)**

Not subject to transport regulations.

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

Not tested

Marine transport (IMDG)**Other applicable information (marine transport)**

Not subject to transport regulations.

Air transport (ICAO-TI/IATA-DGR)**Other applicable information (air transport)**

Not subject to transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

no data available

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

Not relevant

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

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EU regulatory information

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):

N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone

Restrictions on use (REACH, annex XVII):

Entry 30: N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

Revision: 11.04.2016

Safety datasheet sections which have been updated: 3

Revision: 7.07.2015

Safety datasheet sections which have been updated: 2, 11

Revision: 11.02.2015

Safety datasheet sections which have been updated: 2 - 16

Relevant H and EUH statements (number and full text)

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360D	May damage the unborn child.
H360Df	May damage the unborn child. Suspected of damaging fertility.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)