ACHEREY-NAGEI



Safety Data Sheet

according to Regulations 1907/2006/EC (REACh) and 2015/830/EU

Spray reagent f. Caffeine, 100 mL Page: 1/9

Date of issue: 05.09.2018 Printing date: 02.06.2020

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

1.1 **Product identifier**

REF 814401

Product name Spray reagent f. Caffeine, 100 mL

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or

the substance or its use is excluded from registration.

1 x 100 mL Caffeine spray reagent

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: sds@mn-net.com (msds@mn-net.com)

US:

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

You find our current versions of SDS (22 languages) in Internet: http://www.mn-net.com/SDS

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

100 mL Caffeine spray reagent







GHS05

GHS07

DANGER Signal word

Hazard classes/categories
Skin Irrit. 2
Flam. Liq. 2
Eye Dam. 1
Eye Irrit. 2
STOT SE 3
Aquatic Chronic 3

2.2 Label elements

According CLP directive inner packages must be only labelled with GHS symbol(s) and product identificator(s) (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 (EU 1272/2008 Annex I - 1.5.2).

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100 mL Caffeine spray reagent







Signal word: DANGER

H318

Causes serious eye damage.

P280sh, P305+351+338, P310

Wear protective gloves/eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

2.3 Other hazards

Possible hazards from physicochemical properties

Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive. In the case of pH values are less than 5 or higher than 9 then it is irritant. Flammable properties.

Information pertaining to particular risks to human and possible symptoms

Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapours especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs.

Information pertaining to particular risks to the environment

not applicable vPvB: not applicable

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

100 mL Caffeine spray reagent

Chemical: CAS No.: 67-64-1 H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3, EUH066, Skin Irrit. 2 Classification:

C₃ H₆ O; (CH₃)₂ -CO Formula: Pseudonym: 2-propanone

TSCA Inventory: listed REACH Reg. No.: 01-2119471330-49-xxxx

606-001-00-8 EC No.: 200-662-2 Indice No.: RTECS: AL3150000 MFCD: 00008765

KE No.: KE-29367 Concentration: 25 - <40 %

H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3, EUH066, Skin Irrit. 2 acc. CLP (GHS):

Chemical: CAS No.: 7553-56-2

Classification: H312, Acute Tox. 4 derm., H332, Acute Tox. 4 inh., H400, Aquatic Acute 1

Formula: TSCA Inventory: listed

01-2119485285-30-xxxx REACH Reg. No.:

EC No.: 231-442-4 Indice No : 053-001-00-3

RTECS: NN1575000 Concentration: 1 - < 2.5 %

acc. CLP (GHS): H412, Aquatic Chronic 3

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> Chemical: CAS No.: 7705-08-0 iron(III) chloride

Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1

Formula: FeCl₃ TSCA Inventory: listed

REACH Reg. No.: 01-2119497998-05-xxxx

EC No.: 231-729-4

RTFCS LJ9100000 MFCD: 00011004

Concentration: 3 - < 10 % acc. CLP (GHS): H318, Eye Dam. 1

Chemical: L(+)-tartaric acid CAS No.: 87-69-4

Classification: H319, Eye Irrit. 2

Formula: C₄ H₆ O₆

Pseudonym: 2,3-dihydroxy- (2R,3R)-butanedioic acid

TSCA Inventory: listed

REACH Reg. No.: 01-2119537204-47-xxxx 201-766-0 EC No.:

RTFCS WW7875000 MECD: 00064207

KE No .: KE-10801 Concentration: 1 - <10 %

acc. CLP (GHS): The criteria for classification are not fulfilled

3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.

List of H and P phrases: see section 16.1

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. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor

After SKIN Contact 4.1.1

Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use

4.1.2

After contact with the eyes rinse thoroughly under running water with the eyelid wide open for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

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 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

After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must to be carried out by an eye specialist. ---

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

DANGER: Highly flammable (GHS regulation). Forms explosive vapour-air mixtures. Formation of hazardous and caustic vapour-air mixtures possible. ---

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5.3 Advice for firefighters

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

5.4 Additional information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Wear eye protection, respectively face protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 **Environmental precautions**

not necessary, contains only small amounts of these substances

6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent. And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water. 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 (VCI): Water hazard class (DE): 2

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage. Use inbreakable container for transport of glass bottles.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

100 mL Caffeine spray reagent

CAS No.: 67-64-1 Chemical: acetone

DNEL: [inh] (1210) mg/m³ DNEL = Derived No-Effect Level (for workers) PNEC_(fresh water): 10.6 mg/L PNEC = Predicted No Effected Concentration

EU value: 500 ppm / 1200 mg/m³ 500 mL/m³ / 1200 mg/m³ TRGS 900 (DE): A/a aveoles passing, E/e respirable, G total

Short-term exposure factor: 2 (I), Y

skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 500 ppm/ 1200 mg/m³ SUVA(CH) BAT value: [U/b] 80 mg/L TRGS 903 (DE):

[U/b] 80 mg/L [U/b] 80 mg/L B blood, U urine, a no limitation, b end of exposition or shift

NIOSH

l: [TWA] 250 ppm / [STEL] 590 mg/m³ [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [TWA] 1000 ppm / [STEL] 2400 mg/m3

Chemical: iodine CAS No.: 7553-56-2

EU value: STEL 0.1 ppm / 1.1 mg/m³ SUVA(CH) MAK value: 0,1 ppm / 1 mg/m³ NIOSH: C 0.1 ppm / 1 mg/m³

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: C 0.1 ppm / 1 mg/m³

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> iron(III) chloride Chemical: CAS No.: 7705-08-0

SUVA(CH) MAK value: 1 e mg/m³

CAS No.: 87-69-4 Chemical: L(+)-tartaric acid

SUVA(CH) MAK value: [MAK] 2 e/[STEL] 4 e mg/m³

8.2 **Exposure controls**

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

8.2.1 Respiratory protection

No additional recommendations.

8.2.2

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

Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection or face protection.

Skin protection 8.2.4

Recommended to avoid contamination with these hazards.

Personal hygiene 8.2.5

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 Caffeine spray reagent

Appearance: liquid Colour: slightly yellow Odor: odorless

pĤ: 2-3

9.2 Other information

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

Relevant Properties of Substance Group

Substances are very volantile and form flammable vapour-air mixtures. ---

SECTION 10: Stability and reactivity

10.1 Reactivity

no further data available.

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

No further data available.

10.4 Conditions to avoid

Not necessary. ---

10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

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

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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 Caffeine spray reagent

Chemical: acetone CAS No.: 67-64-1

TSCA Inventory: listed California Proposition 65 List: not listed

ACGIH: 750 ppm

Exposure Routes: inhalation, ingestion, skin and/or eye contact

Target Organs: Eyes, skin, respiratory system, central nervous system

Symptoms: irritation eyes, nose, throat, headache, dizziness, central nervous system depression, dermatitis

Australia NICNAS: not listed Canada CEPA 1999: DSL yes

[PAC] Yes, Japan PDSCL: not listed Japan CSCL/PRTR:

Japan ISHL: listed ≥1,0%/≥0,1%, Article 57-1+2 (Labelling&SDS required)

South Korea TCCA: KE-29367 Korea Exist.Chem.Inventory: LD50_{orl rat}: 5800 mg/kg LC50_{ihl rat}: [8h] 50.1 g/m³ LD50_{drm rbt}: 7.426-15.8 g/kg

Chemical: iodine CAS No.: 7553-56-2

TSCA Inventory: listed

inhalation, ingestion, skin and/or eye contact **Exposure Routes:**

Target Organs: Eyes, skin, respiratory system, central nervous system, cardiovascular system

Symptoms: irritation eyes, skin, nose; lacrimation (discharge of tears); headache; chest tightness; skin burns,

rash; cutaneous hypersensitivity

LD50_{orl rat}: 14000 mg/kg

Chemical: iron(III) chloride CAS No.: 7705-08-0

TSCA Inventory: listed

Japan ISHL: listed >1,0%/>1,0% LD50_{orl rat}: 450 mg/kg

Chemical: L(+)-tartaric acid CAS No.: 87-69-4

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-10801 LC_Low_{orl rat}: 7500 mg/kg

LD50_{orl mus}: 4360 mg/kg

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

100 mL Caffeine spray reagent

Chemical: CAS No.: 67-64-1

10.6 mg/L

PNEC (fresh water):
PNEC = Predicted No Effected Concentration

LC50_{daphnia magna/48h}: [48h] 8.8 g/L [4d] 5540 mg/L $LC50_{fish/96h}$: EC50daphnia/48h: 2212 mg/L IC5: 7500 mg/L IC50scenedesmus quadricauda/72h: [30 min] 61,15 g/L EC10_{pseudomonas putita/16h}: WGK No.: 0006 Water hazard class (DE):

Dispersion coefficient_(octanol-water): -0.24Storage class (VCI):

iodine

Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment. Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).

Water hazard class (DE): WGK No.: 0492 2

Storage class (VCI): 12-13

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Chemical: iron(III) chloride CAS No.: 7705-08-0

LC50_{fish/96h}: 23_{24h} mg/L EC50_{daphnia/48h}: 29.7 mg/L

Water hazard class (DE): 1 WGK No.: 0515

Storage class (VCI): 8 B

Chemical: L(+)-tartaric acid CAS No.: 87-69-4

Water hazard class (DE): - WGK No.: (5094)

Dispersion coefficient(octanol-water): -0.76 Storage class (VCI): -12-13

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no additional 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. Empty containers of corrosive reagents prior to disposal, rinse with water

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 declaration for transportation

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

Or use Alternative declaration for transportation:

14.1 UN number: 1993 14.2 UN proper shipping name: Flammable liquid, n.o.s. (acetone mixture)

14.3 Class: 3 14.4 Packing group: III

Road transport

Classification code: F1
Limited Quantity: 5 L Tunnel restriction code: E
Excepted Quantity: E 1 Special instructions: 640E

PAX: 355 max. weight PAX: 60 L
CAO: 366 max. weight CAO: 220 L

Maritime transport
EmS: F-E, S-E Storage category: A

14.5 Environmental hazards

none, contains only small quantities of hazardous substances, contains only small amounts of these substances

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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

MN Leaflet/User manual, also see www.mn-net.com

Look for your country-specific regulations.

15.2 Chemical safety assessment

not necessary for these small amounts ---

SECTION 16: Other information

16.1 List of H and P phrases

16.1.1 List of relevant H phrases

H225 Highly flammable liquid and vapour.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

16.1.2 List of relevant P phrases

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233 Keep container tightly closed.
P260D Do not breathe vapours.
P273 Avoid release to the environment.
P280sh Wear protective gloves/eye protection.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

16.2 Training advice

Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.

16.3 Recommended restriction on use

Only for professional user.

Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)!

Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or for DE §§ 11-13 MuSchG 2017)! 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 Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress

Regulation 1480/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress

TRGS 900, German engineering rules governing limits in air at work, updated 03/2019

SUVA .CH, Limits in air at work 2009, revised on 01.2009

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KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

Reason for Revision: 2016-03 Adaptation of regulation 1221/2015/EU

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