

Safety Data Sheet

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

REF: 814012

7x8 ml indiv.comp. of mixture 2 7x8 mL

Page: 1/9

Printing date: 02.06.2020

Date of issue: 05.09.2018

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

1.1 Product identifier

REF 814012
Product name 7x8 ml indiv.comp. of mixture 2 7x8 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.

7 x 8 mL Test dye/mixture 2

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)

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

8 mL Test dye/mixture 2



GHS02



GHS07



GHS08



GHS09

Signal word

DANGER

Hazard identification

Hazard classes/categories

H225	Flam. Liq. 2
H304	Asp. Tox. 1
H315	Skin Irrit. 2
H336	not defined
H361d	Repr. 2
H373	STOT RE 2
H410	Aquatic Chronic 1

2.2 Label elements

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identifier(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).

Safety Data Sheet

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

REF: 814012

7x8 ml indiv.comp. of mixture 2 7x8 mL

Page: 2/9

Printing date: 02.06.2020

Date of issue: 05.09.2018

8 mL Test dye/mixture 2



GHS02



GHS07



GHS08



GHS09

Signal word: DANGER

H304, H361d, H410

May be fatal if swallowed and enters airways. Suspected of damaging the unborn child. Very toxic to aquatic life with long lasting effects.

P280sh, P301+310, P331, P391

Wear protective gloves/eye protection. IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Do NOT induce vomiting. Collect spillage.

2.3 Other hazards

Possible hazards from physicochemical properties

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

Suspected of damaging the unborn child. May be fatal if swallowed and enters airways. -

Information pertaining to particular risks to the environment

Very toxic to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.

PBT: not applicable

vPvB: not applicable

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

8 mL Test dye/mixture 2

Chemical: *toluene*

CAS No.: 108-88-3

Classification: H225, Flam. Liq. 2, H304, Asp. Tox. 1, H315, Skin Irrit. 2, H336, STOT SE 3, H361d, Repr. 2, H373, STOT RE 2

Formula: C₇H₈; CH₃-C₆H₅

Pseudonym: methyl-benzene

TSCA Inventory: listed

REACH Reg. No.: 01-2119471310-51-xxxx

EC No.: 203-625-9

Indice No.: 601-021-00-3

RTECS: XS5250000

MFCD: 00008512

KE No.: KE-33936, Toxic 97-1-298, Acc. Precaution Chem.

Concentration: 60 - <80 %

acc. CLP (GHS): H225, Flam. Liq. 2, H304, Asp. Tox. 1, H315, Skin Irrit. 2, H336, STOT SE 3, H361d, Repr. 2, H373, STOT RE 2

Chemical: *cyclohexane*

CAS No.: 110-82-7

Classification: H225, Flam. Liq. 2, H304, Asp. Tox. 1, H315, Skin Irrit. 2, H336, STOT SE 3, H410, Aquatic Chronic 1

Formula: C₆H₁₂

TSCA Inventory: listed

REACH Reg. No.: 01-2119463273-41-xxxx

EC No.: 203-806-2

Indice No.: 601-017-00-1

RTECS: GU6300000

MFCD: 00003814

KE No.: KE-18562

Concentration: 30 - <40 %

acc. CLP (GHS): H225, Flam. Liq. 2, H304, Asp. Tox. 1, H315, Skin Irrit. 2, H336, STOT SE 3, H410, Aquatic Chronic 1

Safety Data Sheet

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

REF: 814012

7x8 ml indiv.comp. of mixture 2 7x8 mL

Page: 3/9

Printing date: 02.06.2020

Date of issue: 05.09.2018

Chemical:	<i>dye(s) for testing</i>	CAS No.:	-
Classification:	No criteria for classification or naming of chemical not required.		
TSCA Inventory:	all listed, <1%		
Concentration:	0.1 - <1 %		
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.

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

CMR Effects: Suspected of damaging the unborn child. ---

4.3 Indication of any immediate medical attention and special treatment needed

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. ---

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 suitable protective gloves (see 8.2.2). 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. Not for organic solvents (see section 13).

Safety Data Sheet

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

REF: 814012	7x8 ml indiv.comp. of mixture 2 7x8 mL	Page: 4/9
Printing date: 02.06.2020	Date of issue: 05.09.2018	

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): 3
Water hazard class (DE): 2

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)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8 mL Test dye/mixture 2

Chemical: *toluene*

CAS No.: 108-88-3

DNEL: [oral] 8.13 mg/kg bw; [inh] 192 mg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC_(fresh water): 0.68 mg/L
PNEC = Predicted No Effect Concentration

EU value: 50 ppm / 190 mg/m³
TRGS 900 (DE): 50 ppm / 190 mg/m³
A/a aveoles passing, E/e respirable, G total

Short-term exposure factor: 4 (II), H, Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: [MAK] 190/[STEL] 760 mg/m³

SUVA(CH) BAT value: B/b 1,0 mg/L

TRGS 903 (DE): B/b 600 µg/L
B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: TWA 100 ppm / 375 mg/m³

NIOSH STEL: TWA 150 ppm / 560 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 200 / C 300 / 500_{10min} ppm

Chemical: *cyclohexane*

CAS No.: 110-82-7

DNEL: 700_{inh} mg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC_(fresh water): 0.207 mg/L
PNEC = Predicted No Effect Concentration

EU value: 200 ppm / 700 mg/m³
TRGS 900 (DE): 200 ppm / 700 mg/m³
A/a aveoles passing, E/e respirable, G total

Short-term exposure factor: 4 (II)
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 200 ppm / 700 mg/m³

SUVA(CH) BAT value: U/b,c 150_{Kreatinin} mg/g

TRGS 903 (DE): U/b,U/c 150_{Kreatinin} mg/g
B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: not listed

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

OSHA: not listed

Chemical: *dye(s) for testing*

CAS No.: -

8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

Safety Data Sheet

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

REF: 814012

7x8 ml indiv.comp. of mixture 2 7x8 mL

Page: 5/9

Printing date: 02.06.2020

Date of issue: 05.09.2018

- 8.2.1 Respiratory protection**
No additional recommendations.
- 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**
Recommended to avoid contamination with these hazards.
- 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

8 mL Test dye/mixture 2

Appearance: liquid	Colour: red	Odor: like chloroform
Odor limit:	50-200 mg/m ³	
Melting point:	-63.5 °C	
Boiling point:	61.7 °C	
Vapour pressure (20°C):	211 hPa	
Vapour density _(air=1) :	4,12	
Specific gravity:	1,48 g/cm ³	
Solubility in water:	< 1 %	
Flashing temperature:	982 °C	
Volatiles by volume:	1035 g/m 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 volatile 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.

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.

8 mL Test dye/mixture 2

Safety Data Sheet

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

REF: 814012 7x8 ml indiv.comp. of mixture 2 7x8 mL Page: 6/9
 Printing date: 02.06.2020 Date of issue: 05.09.2018

Chemical: *toluene* CAS No.: 108-88-3
 TSCA Inventory: listed California Proposition 65 List: WARNING! Cause birth defects or other reproductive harms
 ACGIH: 50 ppm
 Target Organs: affect the eye or visual capacity, mild skin irritation
 Symptoms: conjunctivitis; corneal damage
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: PAC Yes, PRTR: ≥1,0% class I, Japan PDSCCL: Deleterious substance
 Japan ISHL: listed ≥0,3%/≥0,1%, Article 57-1+2 (Labelling&SDS required)
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-33936, Toxic 97-1-298, Acc. Precaution Chem.
 LD50_{orl rat}: 5580 mg/kg
 LC_{LoWihl hmn}: 50 mg/m³
 LC50_{ihl rat}: [4h] 25,7-30 mg/L
 LD50_{drm rbt}: 5000 mg/kg

Chronic Effects: May cause damage to organs through prolonged or repeated exposure.
 Carcinogenic Effects: Suspected of damaging the unborn child.
 EU carcinogen: repr. 2
 TRGS 905 (DE): R_F C

Chemical: *cyclohexane* CAS No.: 110-82-7
 TSCA Inventory: listed California Proposition 65 List: not listed
 Symptoms: skin irritation; mild eye irritation
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: PAC Yes, Japan PDSCCL: not listed
 Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-18562
 LD50_{orl rat}: 12.7 g/kg
 LC50_{ihl rat}: 14_{4h} mg/L
 LD50_{drm rbt}: >2000 mg/kg

Chemical: *dye(s) for testing* CAS No.: -
 TSCA Inventory: all listed, <1%

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

8 mL Test dye/mixture 2

Chemical: *toluene* CAS No.: 108-88-3
 PNEC_(fresh water): 0.68 mg/L
 PNEC = Predicted No Effected Concentration
 LC50_{daphnia magna/48h}: [4d] 3.78 mg/L
 LC50_{fish/96h}: [4d] 5.5 mg/L
 EC50_{daphnia/48h}: 3,23 mg/L
 EC50_{pseudokirchneriella subcapitata/72h}: [3h] 134-207 mg/L
 Water hazard class (DE): 2 WGK No.: 0194
 Dispersion coefficient_(octanol-water): 2.73
 Storage class (VCI): 3

Chemical: *cyclohexane* CAS No.: 110-82-7
 Very toxic to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.
 Environmental hazards must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).
 PNEC_(fresh water): 0.207 mg/L
 PNEC = Predicted No Effected Concentration
 LC50_{fish/96h}: 34 mg/L
 EC50_{daphnia/48h}: 3.8 mg/L
 Water hazard class (DE): 2 WGK No.: 0063
 Storage class (VCI): 3

Safety Data Sheet

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

REF: 814012

7x8 ml indiv.comp. of mixture 2 7x8 mL

Page: 7/9

Printing date: 02.06.2020

Date of issue: 05.09.2018

Chemical: *dye(s) for testing*
Storage class (VCI): 12

CAS No.: -

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). Or collect in solvent waste (waste code number 07 07 04).

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 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:**

UN 1993 class 3 II, **Excepted Quantities** (≤ 30 mL/ $\Sigma \leq 500$ mL) = ADR/ IATA E2

or

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

14.3 Class: 3 14.4 Packing group: II

Road transport

Classification code: F1 Tunnel restriction code: E

Limited Quantity: 1 L Special instructions: 640C

Excepted Quantity: E 2

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

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

Safety Data Sheet

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

REF: 814012

7x8 ml indiv.comp. of mixture 2 7x8 mL

Page: 8/9

Printing date: 02.06.2020

Date of issue: 05.09.2018

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.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

16.1.2 List of relevant P phrases

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P260D	Do not breathe vapours.
P260sh	Do not breathe dust/vapours.
P273	Avoid release to the environment.
P280sh	Wear protective gloves/eye protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331	Do NOT induce vomiting.
P391	Collect spillage.

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.
 MACHEREY-NAGEL GmbH & Co. KG makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly MACHEREY-NAGEL GmbH & Co. KG will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

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
 Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
 TRGS 905, German engineering rules governing carcinogens and mutagens, updated 03/18
 KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Safety Data Sheet

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

REF: 814012

7x8 ml indiv.comp. of mixture 2 7x8 mL

Page: 9/9

Printing date: 02.06.2020

Date of issue: 05.09.2018

Revisions/Updates

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