

# Safety Data Sheet

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

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

### 1.1 Product identifier

REF 814011  
 Product name 4x8 ml indiv.comp. of mixture 1, 4x8 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.

4 x 8 mL Test dye/mixture 1

### 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 1



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

### 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).

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## 8 mL Test dye/mixture 1



GHS02 GHS07 GHS08

Signal word: DANGER

H304, H361d

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

P280sh, P301+310, P331

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

### 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**

PBT: not applicable

vPvB: not applicable

**Other hazards**

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

**8 mL Test dye/mixture 1**

Chemical:	<i>toluene</i>	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:	C <sub>7</sub> H <sub>8</sub> ; CH <sub>3</sub> -C <sub>6</sub> H <sub>5</sub>		
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:	95 - <100 %		
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		

### 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

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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

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## 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

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## 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

### 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).

### 6.4 Reference to other sections

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## 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.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**8 mL Test dye/mixture 1**

Chemical: *toluene*

CAS No.: 108-88-3

DNEL: [oral] 8.13 mg/kg bw; [inh] 192 mg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.68 mg/L  
PNEC = Predicted No Effect Concentration

EU value: 50 ppm / 190 mg/m<sup>3</sup>  
 TRGS 900 (DE): 50 ppm / 190 mg/m<sup>3</sup>  
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/m<sup>3</sup>

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/m<sup>3</sup>

NIOSH STEL: TWA 150 ppm / 560 mg/m<sup>3</sup>

[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<sub>10min</sub> ppm

### 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.

#### 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 1**

Appearance: liquid	Colour: colourless	Odor: aromatic
Odor limit:	>0.6-153 mg/m <sup>3</sup>	
Melting point:	-95 °C	
Boiling point:	111 °C	
Flash point:	6 °C	
Explosion limits:	1.2-7.8 Vol%	
Vapour pressure (20°C):	29 hPa	
Vapour density <sub>(air=1)</sub> :	3,2	
Specific gravity:	0,87 g/cm <sup>3</sup>	
Solubility in water:	< 0,1 %	
Flashing temperature:	535 °C	
Volatiles by volume:	110 g/m <sup>3</sup>	

### 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. ---

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## 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 1

Chemical:	<i>toluene</i>	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 PDSCL: 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 <sub>orl rat</sub> :	5580 mg/kg		
LC <sub>50</sub> <sub>ihl hm</sub> :	50 mg/m <sup>3</sup>		
LC50 <sub>ihl rat</sub> :	[4h] 25,7-30 mg/L		
LD50 <sub>drm rbt</sub> :	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<sub>F</sub> C

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 8 mL Test dye/mixture 1

Chemical:	<i>toluene</i>	CAS No.:	108-88-3
PNEC (fresh water):	0.68 mg/L		
PNEC = Predicted No Effect Concentration			
LC50 <sub>daphnia magna/48h</sub> :	[4d] 3.78 mg/L		
LC50 <sub>fish/96h</sub> :	[4d] 5.5 mg/L		
EC50 <sub>daphnia/48h</sub> :	3,23 mg/L		
EC50 <sub>pseudokirchneriella subcapitata/72h</sub> :	[3h] 134-207 mg/L		
Water hazard class (DE):	2	WGK No.:	0194
Dispersion coefficient (octanol-water):	2.73		
Storage class (VCI):	3		

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- 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** ( $\leq 30 \text{ mL} / \sum \leq 500 \text{ mL}$ ) = 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
- 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

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MN Leaflet/User manual, also see [www.mn-net.com](http://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.

#### 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.
P280sh	Wear protective gloves/eye protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331	Do NOT induce vomiting.

### 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, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

Regulation 669/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

Regulation 1480/2018/EU, 4<sup>th</sup> 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)

#### Revisions/Updates

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