

# Safety Data Sheet

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

REF: 90801

Moisture indicator papers (pack 12)

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Printing date: 09.05.2017

Date of issue: 02.05.2017

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

### 1.1 Product identifier

REF 90801  
 Product name Moisture indicator papers (pack 12)

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.

12 x 1 pc Moisture indicator (completely impregnated)

### 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](mailto: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/MSDS>

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

1 pc Moisture indicator (completely impregnated)

Directive 1999/45/EC

Symbols

R 42/43-49



T Xn

CLP Directive 1272/2008/EC

GHS pictograms



GHS07 GHS08

Signal word

DANGER

**Hazard identification**

**Hazard classes/categories**

H317	Skin Sens. 1
H334	Resp. Sens. 1
H341	Muta. 2
H350i	Karz. 1A
H360F	Repr. 1B
H412	Aquatic Chronic 3

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## 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**. This labelling exemption is NOT valid for sensibilizing mixtures.

According **CLP (GHS)** inner packages must be only labelled with symbol(s) and product identifier (EU 1272/2008 Annex I - 1.5.1.2). Harmful chemicals/mixtures with signal word: **WARNING** must not be labelled with H and P phrases until **125 mL** (EU 1272/2008 Annex I - 1.5.2). This labelling exemption is NOT valid for sensibilizing substances. The hazard rules for labelling pure cobalt dichloride have no practical relevance. **The following listed labelling would be creating an "OVERLABELLING" of cobalt dichloride.** This is not the intention of the chemical regulations.

### 1 pc Moisture indicator (completely impregnated)

Directive 1999/45/EC

Symbols:



T

Xn

R 42/43-49

May cause sensitization by inhalation and skin contact. May cause cancer by inhalation.

S 22-53-60

Do not breathe dust. Avoid exposure — obtain special instructions before use. This material and its container must be disposed of as hazardous waste.

CLP Directive 1272/2008/EC

GHS pictograms:



GHS07

GHS08

Signal word: DANGER

H317, H334, H341, H350i, H360F

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer if inhaled. May damage fertility.

P261sh, P280sh, P342+311, P405

Avoid breathing dust/vapours. Wear protective gloves/eye protection. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Store locked up.

## 2.3 Other hazards

### Possible Hazards from physicochemical Properties

A single humidity indicator has considerably less hazardous potential. Repeated contact needs safety measures (see page down).

### Information pertaining to particular Risks to Human and possible Symptoms

Cause after skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer. May cause cancer if inhaled. May damage fertility.

### Information pertaining to particular Risks to the Environment

PBT: not applicable

vPvB: not applicable

### Other Hazards

Harmful if inhaled and/or by multiple exposition. Inhaled dust may cause cancer, also in human.

The classification of the pure substance as cancer and as allergen is related to respirable form (dust, aerosol) respectively to professional skin contact. In the impregnated test paper CoCl<sub>2</sub> is only in an adsorbed, fixed form. By intended use an exposition is either excluded or for skin contact negligible.---

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## SECTION 3: Composition/Information on Ingredients

### 3.1 Substances or 3.2 Mixtures

#### 1 pc Moisture indicator (completely impregnated)

Chemical:	<i>cobalt(II) chloride</i>	CAS No.:	7646-79-9
Concentration:	2,2 - <5,5 %	Correlation factor:	x 0.454 (= %Co)
Formula:	CoCl <sub>2</sub>		
REACH Reg. No.:	01-2119517584-37-xxxx		
<b>SVHC listed:</b>	<b>YES</b>		
EC No.:	231-589-4	Indice No.:	027-004-00-5
RTECS:	GF9800000		
TSCA Inventory:	listed		
KE No.:	KE-06095		
acc. 1999/45/EC:	R 42/43-49-52/53	acc. CLP (GHS):	H317, H334, H341, H350i, H360F, H412

Chemical:	<i>filter paper (cellulose CAS 9004-34-6)</i>	CAS No.:	-
Concentration:	80 - <100 %		
Formula:	(C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> ) <sub>n</sub>		
REACH Reg. No.:	exempt, Annex IV		
EC No.:	232-674-9		
RTECS:	FJ5691460		
TSCA Inventory:	listed		
KE No.:	KE-05339		
acc. 1999/45/EC:	-	acc. CLP (GHS):	not necessary

### 3.3 Remarks

List of R, H and P phrases: see section 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. Take to a doctor, in a raised position if there are breathing difficulties.

#### 4.1.1 After SKIN Contact

Remove dust with wetted tissue. Remove contaminated clothing immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. Avoid neutralisation. Then apply a loose bandage.

#### 4.1.2 After EYE Contact

Rub dust with teardrops from eyes or: 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

Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. After inhalation of dust fresh air should be inhaled.

#### 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

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid inhalation of dust.

Carcinogenic Effects: Suspected of causing genetic defects. May cause cancer. May cause cancer if inhaled. May damage fertility. ---

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

After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions. Inform patient respectively further measures and the possibility of long-term damages. ---

## 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.

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## 5.2 Special hazards arising from the substance or mixture

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## 5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic.  
For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

## 5.4 Additional Information

Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances. ---

## SECTION 6: Accidental release measures

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

Wear suitable protective gloves (see 8.2.2). Wear eye 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

And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water.

### 6.4 Reference to other sections

see information in section 5.4 ---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product. Use only in well-ventilated working areas.

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

The original product package of MACHEREY-NAGEL allows a safe storage. Products containing also toxic substances should be kept locked up.

Storage class (VCI): 6.1B

Water hazard class (DE): 2

#### 7.2.1 Requirements for Stock Rooms and Containers

Keep original product packages tightly closed during handling and storage, so that they are not immediately accessible to outside parties.

### 7.3 Specific end use(s)

Product for analytical use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### 1 pc Moisture indicator (completely impregnated)

Chemical: *cobalt(II) chloride*

CAS No.: 7646-79-9

EU value: carc. 2, mut. 3, R<sub>F</sub> 2

TRGS 900 (DE): 0,1 E g/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: 4

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

SUVA(CH) MAK value: 0,1 e mg/m<sup>3</sup>

SUVA(CH) BAT value: Co U/b 60 µg/L

NIOSH: 0,05 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

Chemical: *filter paper (cellulose CAS 9004-34-6)*

CAS No.: -

TRGS 900 (DE): 1.25 A / 4 E mg/m<sup>3</sup>

E/e respirable

SUVA(CH) MAK value: 3 a mg/m<sup>3</sup>

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

[www.mn-net.com](http://www.mn-net.com)



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## 8.2 Exposure controls

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

### 8.2.1 Respiratory Protection

Use for open access of these substances for example a protection filter, class A/AX. No additional recommendations.

### 8.2.2 Hand Protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, natural latex, Neopren, or Nitril (f.ex. from Ansell or KCL). Use for short times chemical resistant latex 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

1 pc Moisture indicator (completely impregnated)

Appearance: solid  
pH:

Colour: blue  
5-7

Odor: odorless

### 9.2 Other information

Relevant Properties of Substance Group

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## 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

Not necessary. ---

### 10.5 Incompatible materials

Avoid contact with concentrated acids and oxidizing agents. 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.

#### 1 pc Moisture indicator (completely impregnated)

Chemical: cobalt(II) chloride

CAS No.: 7646-79-9

TSCA Inventory: listed

ACGIH: 0.05<sub>dust, fume</sub> mg/m<sup>3</sup>

Japan CSCL/PRTR: PRTR: ≥1,0% Co class I

Japan PDSCL: not listed

Japan ISHL: listed ≥0,1%/≥0,1%,

Korea Exist.Chem.Inventory: KE-06095

LD50<sub>orl rat</sub>: 80 mg/kg

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LD50<sub>drm rat</sub> : 2 g/kg  
 Acute Effects: Cause after skin contact, impairments of health when ingested in small quantities.  
 Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 Carcinogenic Effects: Suspected of causing genetic defects. May cause cancer. May cause cancer if inhaled. May damage fertility.  
 EU carcinogen: carc. 2, repr. 2  
 TRGS 905 (DE): K2, M3A  
 TRGS 907 (DE): Sah

Chemical:	<i>filter paper (cellulose CAS 9004-34-6)</i>	CAS No.: -
TSCA Inventory:	listed	California Proposition 65 List: not listed
Australia NICNAS:	not listed	Canada CEPA 1999: DSL yes
Japan CSCL/PRTR:	not listed	
Japan PDSCL:	not listed	Japan ISHL: not listed
South Korea TCCA:	not listed	
Korea Exist.Chem.Inventory:	KE-05339	
LD50 <sub>orl rat</sub> :	>5000 mg/kg	
LC50 <sub>ihl rat</sub> :	>5800 <sub>4h</sub> mg/m <sup>3</sup>	
LD50 <sub>drm rbt</sub> :	>2000 mg/kg	

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 1 pc Moisture indicator (completely impregnated)

Chemical:	<i>cobalt(II) chloride</i>	CAS No.: 7646-79-9
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):	2	WGK No.: 0493
Storage class (VCI):	6.1 B	

Chemical:	<i>filter paper (cellulose CAS 9004-34-6)</i>	CAS No.: -
Water hazard class (DE):	nwg	
Storage class (VCI):	11	

### 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). Close container tightly.

### 13.1 Waste treatment methods

Dispose of contents/container to regulated waste treatment.



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## SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according the transport regulations

### 14.5 Environmental hazards

not necessary, 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

## 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 ---

## SECTION 16: Other Information

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

#### 16.1.1 List of relevant R phrases

R42/43 May cause sensitization by inhalation and skin contact.  
 R49 May cause cancer by inhalation.  
 R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### 16.1.2 List of relevant H phrases

H317 May cause an allergic skin reaction.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H341 Suspected of causing genetic defects.  
 H350i May cause cancer if inhaled.  
 H360F May damage fertility.  
 H412 Harmful to aquatic life with long lasting effects.

#### 16.1.3 List of relevant P phrases

P201 Obtain special instructions before use.  
 P261sh Avoid breathing dust/vapours.  
 P273 Avoid release to the environment.  
 P280sh Wear protective gloves/eye protection.  
 P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P308+313 IF exposed or concerned: Get medical advice/attention.  
 P342+311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
 P405 Store locked up.

### 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 DE §§ 4 und 5 MuSchRiV)!  
 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

TRGS 900, German engineering rules governing limits in air at work, updated September 2016

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 March 2016

TRGS 907, German engineering rules governing listing of substances and causes of sensitizations, updated November 2011

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

### Revisions/Updates

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