

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 91328
 Product name QUANTOFIX Formaldehyde

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.

2 x 25 mL HCHO-1
 1 x 100 test strips

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.
 If CE labelling: Product for in-vitro-diagnostic use (IVD) or Accessory for medical use

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


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

SECTION 2: Hazard identification

2.0 Classification of the complete product


Directive 1999/45/EC
 Symbols



C

R 35

CLP Directive 1272/2008/EC
 GHS pictograms



GHS05

Signal word DANGER

Hazard identification	Hazard classes/categories
H290	Metal Corrosion cat. 1
H314	Skin Corrosion 1A. Serious Damage to Eyes 1



2.1 Classification of the substance or mixture

25 mL HCHO-1
Directive 1999/45/EC

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Symbols	R 35  C
<i>CLP Directive 1272/2008/EC</i>	
GHS pictograms	 GHS05
Signal word	DANGER
Hazard identification	Hazard classes/categories
H290	Metal Corrosion cat. 1
H314	Skin Corrosion 1A. Serious Damage to Eyes 1

100 test strips

Directive 1999/45/EC

Symbols do not need labelling as hazardous

CLP Directive 1272/2008/EC

GHS pictograms do not need labelling as hazardous
Signal word -

No hazard class

2.2 Label elements

According **CLP (GHS)** inner packages must be only labelled with symbol(s) and product identifier (EU 1272/2008 Annex I - 1.5.1.2).

25 mL HCHO-1

Directive 1999/45/EC

Symbols:



C
R 35
Causes severe burns.

S 26-37/39

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.

CLP Directive 1272/2008/EC

GHS pictograms:



GHS05
Signal word: DANGER

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H314
Causes severe skin burns and eye damage.

P260sh, P280sh, P303+361+353, P305+351+338, P310
Do not breathe dust/vapours. Wear protective gloves/eye protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. 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/...

100 test strips

Directive 1999/45/EC

Symbols:

-
-

S 22
Do not breathe dust.

CLP Directive 1272/2008/EC

GHS pictograms:
do not need labelling as hazardous
Signal word: -

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.

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

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

25 mL HCHO-1

Chemical:	sodium hydroxide solution	CAS No.:	1310-73-2
Concentration:	20 - <35 %		
Formula:	NaOH•H ₂ O		
Pseudonym:	soda lye		
REACH Reg. No.:	01-2119457892-27-xxxx		
EC No.:	215-185-5	Indice No.:	011-002-00-6
RTECS:	WB4900000		
TSCA Inventory:	listed		
KE No.:	KE-31487		
acc. 1999/45/EC:	R 35	acc. CLP (GHS):	H290, H314

100 test strips

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Chemical: <i>cellulose</i>	CAS No.: 9004-34-6
Concentration: 1 - <10 %	
Formula: (C ₆ H ₁₀ O ₅) _n	
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
Chemical: <i>chemicals/mixture < 1%, no declaration necessary</i>	CAS No.: -
Concentration: 0,1 - <1 %	
KE No.: listed	
acc. 1999/45/EC: -	acc. CLP (GHS): not necessary
Chemical: <i>PVC foil (CAS 9002-86-2)</i>	CAS No.: -
Concentration: 95 - <100 %	
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. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor.

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. (If possible) use soap. 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 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. If vomiting and if insensible place patient in recovery position and keep airways free. After inhalation of dust fresh air should be inhaled.

4.1.4 After ORAL Intake

After oral intake lots of water with activated charcoal supplement should be drunk after it has been ingested. Do not induce vomiting under any circumstances. Do not make any efforts to neutralise it. Contact medical advice for possible consequences.

4.2 Most important symptoms and effects, both acute and delayed

Avoid inhalation of dust. ---

4.3 Indication of any immediate medical attention and special treatment needed

CORROSIVE DAMAGE: After SKIN CONTACT rinse with water for a long time. Efforts to neutralise the substance can frequently make matters worse. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must be carried out by an eye specialist. After INTAKE administer aluminium oxide drug suspensions. Administer a prophylaxis to counter pulmonary oedema following the INGESTION of corrosive aerosols. In the event of RESPIRATORY DISTRESS ensure that the patient inhales oxygen.

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

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. Spray any vapours released with water. Retent fire water. Use only acid-resistant safety equipment.

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, 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

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

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.

7.2 Conditions for safe storage, including any incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage.

Storage class (VCI): 8B

Water hazard class (DE): 1

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.

If CE labelling: Product for in-vitro-diagnostic use (IVD) or Accessory for medical use

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

25 mL HCHO-1

Chemical: *sodium hydroxide solution*

CAS No.: 1310-73-2

DNEL: 1_{inh} mg/m³

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): (2 E) mg/m³
E/e respirable

Short-term exposure factor: (=1=, Y)

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

SUVA(CH) MAK value: 2 e mg/m³

NIOSH: 2 mg/m³

OSHA: TWA 2 mg/m³

100 test strips

Chemical: *cellulose*

CAS No.: 9004-34-6

TRGS 900 (DE): Staub 1.25 A / 4 E mg/m³
E/e respirable

SUVA(CH) MAK value: 3 a ppm

NIOSH: TWA 10 (total) / 5 (resp) mg/m³

OSHA: TWA 15 (total) / 5 (resp) mg/m³

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Chemical: *chemicals/mixture < 1%, no declaration necessary*

CAS No.: -

Chemical: *PVC foil (CAS 9002-86-2)*

CAS No.: -

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 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 or face protection.

8.2.4 Skin Protection

Recommended to avoid clothing damage, and 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

25 mL HCHO-1

Appearance: liquid

Color: colourless

Odor: odorless

pH:

14

Specific gravity:

1,35 g/mL

Solubility in water:

0-100 %

100 test strips

Appearance: solid

Color: colored

Odor: odorless

9.2 Other information

Relevant Properties of Substance Group

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.

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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.

25 mL HCHO-1

Chemical:	<i>sodium hydroxide solution</i>	CAS No.:	1310-73-2
TSCA Inventory:	listed	California Proposition 65 List:	not listed
Exposure Routes:	inhalation, ingestion, skin and/or eye contact		
Target Organs:	Eyes, skin, respiratory system		
Symptoms:	irritation eyes, skin, mucous membrane; pneumonitis; eye, skin burns; temporary loss of hair		
Australia NICNAS:	not listed	Canada CEPA 1999:	DSL Yes
Japan CSCL/PRTR:	not listed		
Japan PDSCL:	not listed	Japan ISHL:	listed $\geq 1,0\%$ / $\geq 1,0\%$, Article 57-2 (SDS required)
South Korea TCCA:	not listed		
Korea Exist.Chem.Inventory:	KE-31487		
LD50 _{orl rat} :	500 ^{100%} mg/kg		
LD50 _{orl mus} :	40 mg/kg		

100 test strips

Chemical:	<i>cellulose</i>	CAS No.:	9004-34-6
TSCA Inventory:	listed	California Proposition 65 List:	not listed
Exposure Routes:	inhalation, skin and/or eye contact		
Target Organs:	Eyes, skin, respiratory system		
Symptoms:	irritation eyes, skin, mucous membrane		
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 _{orl rat} :	>5000 mg/kg		
LC50 _{ihl rat} :	>5800 _{4h} mg/m ³		
LD50 _{drm rbt} :	>2000 mg/kg		

Chemical:	<i>chemicals/mixture < 1%, no declaration necessary</i>	CAS No.:	-
Korea Exist.Chem.Inventory:	listed		

Chemical:	<i>PVC foil (CAS 9002-86-2)</i>	CAS No.:	-
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SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

25 mL HCHO-1

Chemical:	<i>sodium hydroxide solution</i>	CAS No.:	1310-73-2
Avoid contact of substance/mixture to environment.			
LC50 _{leuciscus idus/96h} :	35-189 mg/L		
LC50 _{fish/96h} :	45.4 mg/L		
EC50 _{daphnia/48h} :	>100 mg/L		
Water hazard class (DE):	1	WGK No.:	142
Storage class (VCI):	8 B		

100 test strips

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

Chemical:	<i>chemicals/mixture < 1%, no declaration necessary</i>	CAS No.:	-
Water hazard class (DE):	1		
Storage class (VCI):	12-13		

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Chemical: *PVC foil (CAS 9002-86-2)* 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).

- 13.1 Waste treatment methods**
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 transport labelling
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

Alternative transport labelling follows:

UN No.: (see below) class 8 II, **Excepted Quantities** (≤30 mL/Σ≤500 mL) = ADR/ IATA E2
 or

14.1 UN number: 3266 **14.2 UN proper shipping name:** Corrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide solution)
14.3 Class: 8 **14.4 Packing group:** II
Road transport
 Classification code: C5 Tunnel restriction code: E
 Limited Quantity: 1 L
 Excepted Quantity: E 2
Air transport
 PAX: 851 max. weight PAX: 1 L
 CAO: 855 max. weight CAO: 30 L
Maritime transport
 EmS: F-A, S-B Storage category: B

- 14.5 Environmental hazards**
not necessary
- 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



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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

R35 Causes severe burns.

16.1.2 List of relevant H phrases

H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.

16.1.3 List of relevant P phrases

P260sh Do not breathe dust/vapours.
 P280sh Wear protective gloves/eye protection.
 P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 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/...
 P390 Absorb spillage to prevent material damage.

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, 4th 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
 KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

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

You find our current versions of MSDS in Internet:
<http://www.mn-net.com/MSDS>