

Material Safety Data Sheet

Filtration · Testing · Chromatography · Bioanalysis
Filterieren · Testen · Chromatographie · Bioanalytik

according to EC Directive 1907/2006/EC

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Version: 2.6.1

1. Identification of the substance/ mixture and company

1.1 Identification/product name

NANOCOLOR® COD 60000 Reagent Tubes
REF 985012

1.2 Use of the substance/ mixture

Product for analytical use (RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0)

1.3 Manufacturer MACHEREY-NAGEL GmbH & Co. KG
Neumann-Neander-Strasse 6-8, D-52355 Dueren**Information from** MACHEREY-NAGEL GmbH & Co. KG
☎ +49 (0)2421 969 0 e-mail: msds@mn-net.com

1.4 Emergency telephone

DE: Gemeinsames Giftinformationszentrum (GGIZ), D-99089 Erfurt, ☎ +49 (0)361 730 730

Outside Germany (DE):

Call your regional Poisons Information Service or call local Life Saving Service.

2. Hazards identification

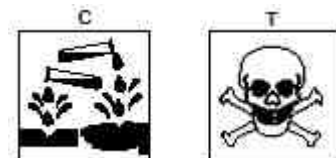
2.1 Hazard description

Toxic and corrosive mixture

Symbol: T

Subsidiary symbol: C

Hazard symbols



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 stem from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs.

Causes severe impairments of health or can lead to death even when only ingested in small quantities due to the swallowing or breathing in of vapours or direct skin contact.

2.2 Information pertaining to particular risks to human and the environment

Can accumulate within the body. Avoid contact of mixture to environment.

3. Composition/information on ingredients

Chemical characterisation

Substance(s): Sulphuric acid 65% with mercury sulphate < 0.25% Hg and potassium dichromate < 0.2% Cr (H₂SO₄, HgSO₄, K₂Cr₂O₇)

Identification of corrosive ingredient:

CAS No.: 7664-93-9 **EC No.:** 231-639-5**INDEX No.:** 016-020-00-8

For preparation:

R reference: 45-46-35-20/21/22-33-52/53 **S reference:** 13-26-28-60-61

4. First aid measures

4.1 First aid instructions

Ensure quiet, warmth, and provide resuscitation if necessary. Take to a doctor, in a raised position if there are breathing difficulties.

Following inhalation of vapours

Fresh air should be inhaled, keeping the airways clear. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary.

After contact with skin

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Rinse the affected skin or mucous membrane thoroughly with water. If necessary, apply a loose dressing.

After contact with the eyes

Rinse thoroughly for min. 10 minutes under running water with the eyelid wide open. Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Then apply a loose bandage. Further treatment must to be carried out by an eye specialist.

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. In the event of respiratory distress ensure that the patient inhales oxygen.

4.2 Further medical treatment/attention

In the event of the substance coming into contact with the skin lengthy rinsing with water is necessary. Efforts to neutralise the substance can frequently make matters worse. Treat symptomatically. Secure the breathing, heart and circulatory function. In the event of respiratory distress ensure that the patient inhales oxygen. Remove the substance quickly from the body. Mechanically induce vomiting or ensure the patient eats medicinal charcoal compressed tablets or drinks aluminium oxide drug solutions. In order to ensure rapid passage through the colon (administer 2 tablespoons of dissolved Glauber's salt). Alleviation of pain, if necessary sedation. Shock treatment. Administer a prophylaxis to counter pulmonary oedema. Apply glucocorticosteroides following inflammatory reactions.

4.3 Specific means of treatment which should always be available at the workplace

An eye bath or spray should be provided at the workplace.

5. Fire-fighting measures

5.1 Suitable 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.

5.2 Hazards, combustion products/gases

Beware of formation of hazardous and caustic vapours.

5.3 Special protective equipment required

Use only acid-resistant safety equipment. 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

The substance itself is not flammable. Product package burns like paper or plastic. Cool any undamaged containers in water, and remove from the danger zone if possible. Heating will lead to an increase in pressure, and a danger of bursting. Spray any vapours released with water. The extinguishing water may cause an acid or alkaline reaction. Only use equipment which is resistant to chemicals.

6. Accidental release measures

6.1 Personal precautions

Wear suitable protective gloves and 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 Methods of cleaning-up

Bind any escaping liquid with universal binder and dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water.

7. Handling and storage

7.1 Handling

In accordance with the testing instructions, that comes with the product. Use a safety bottle when shaking test tubes. The original product package allows a safe handling.

7.2 Storage

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The original product package of MACHEREY-NAGEL allows a safe storage. Keep packages tightly closed during handling and storage, and store in a well-ventilated place at max. 25 °C, away or preferably separate from substances with which a hazardous reaction could take place, so that they are not immediately accessible to outside parties. Toxic products should be kept locked up.

Storage class (German chemical industry): 6.1 B

8. Exposure controls/personal protection

8.1 Exposure limit values

$K_2Cr_2O_7$: TRGS 900/SUVA.CH: 0.05 E mg/m³; TRGS 901: No. 3; SUVA.CH: BAT U/b 35 µg/l Cr; EU/TRGS 905: Carc. 2, Mut. 2, R_E 2, R_F 2/ HgSO₄: TRGS 900/SUVA.CH: 0.1 E mg/m³; TRGS 903: BAT 25/100 µg/l

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.

Respiratory protection: see 7.2

Hand protection: yes, rubber gloves acc. EN 374

Eye protection: yes, safety glasses

Skin protection: yes, recommended

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.

9. Physical and chemical properties

9.1 General information

Appearance: liquid

Colour:

Odour:

9.2 Important health, safety and environmental information

pH when supplied: 0

Melting point [°C]: -

Boiling point [°C]: ~180

Relative density: (at 20 °C) >1.5 g/cm³

Solubility in water: (at 20 °C) 0-100%

10. Stability and reactivity

10.1 Conditions to avoid not necessary

10.2 Materials to avoid not necessary

10.3 Hazardous decomposition products

For safety separation the reagents should be stored in the original package. Decompositions are not observed during the expiration period under recommended conditions (see instruction leaflet).

11. Toxicological information

11.1 Toxicological effects

The **corrosive effect** can differ markedly depending on the concentration, dissociation, type of reaction and fat-solubility of the substance. Lesser or greater levels of irritation or the formation of sloughs result; can quickly result in corneitis if it comes into contact with the eye. Concentrated corrosive substances can penetrate deep and completely destroy the tissue (often substances possess albumin-precipitating properties). It causes pains in the area of the mucous membranes or bleeding damage of the mucous membrane tissue after it has been ingested.

The acute and chronic **toxic effects** of toxic substances can have a toxic respiratory effect and in particular have a damaging effect on the organs or lead to super-sensitisation. The symptoms are reddening of the skin, unusually dry or moist, warm or cool skin, oedemas, blisters, exsiccosis, bleeding and sloughs.

11.2 Toxicological tests

Corrosive effects: yes

Irritant effects: yes

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Effects after multiple exposition: yes, possible
Cancerogen/mutagen effects: Carc. 2, Mut. 2, R_E 2, R_F 2

Other effects:

LD₅₀ oral rat 57_(HgSO4) mg/kg LC₅₀ ihl rat 510_(H2SO4) mg/m³/2h
LD₅₀ drm rbt 625_(HgSO4) mg/kg LCLo_{ori gpg} 163_(K2Cr2O7) mg/kg

Quantitative data on the toxicity of this product are not available.

12. Ecological information

12.1 Ecotoxicity

The potential effect of a single package on the environment is considerably low. Hazardous to drinking water, if large amounts enter the subsoil and waters.

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 disposal (waste code number 16 05 06).

14. Transport information

Proper shipping name: Chemical Kit

UN No.: 3316

Class: 9

Packaging group: II

Commercial transport-

- road/railway

ADR/RID

Class Code: M11, ADR 3.3.1/251: LQ 22 = 10 kg

Maritime transport:

IMDG

EmS: F-A,S-P

Air transport:

IATA-DGR

PAX+CAO 915

Other data: For the declaration as **chemical kit** the total quantity of dangerous goods in any one outer package must not exceed 10 kg.

Alternative transport information

Transport name: Corrosive liquid, toxic, n.o.s. (sulphuric acid solution, mercury sulphate)

UN No: 2922

Class: 8

Packaging group (PG): II

- road ADR **Cl.Code:**

C1, LQ 22 = 1 L/ 30 kg

15. Regulatory information

15.1 Labelling

Code:

T

Subsidiary Code:

C

Description:

Toxic and corrosive

Constituents which are crucial to the hazard:

Sulphuric acid 65% with mercury sulphate < 0.25% Hg and potassium dichromate < 0.2% Cr

R reference: 45-46-35-20/21/22-33-52/53

S reference: 13-26-28-60-61

15.2 International and national regulations

1. European Community Directive 67/548/EEC governing the classification, packaging and labelling of dangerous substances, including Adaptation to Technical Progress (ATP), 2006/121/EC
2. German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on May 2008
3. German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on December 2004, according to Directive 98/24/EC
4. Directive 1998/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
5. Directive 1999/45/EC concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations
6. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
7. Regulation (EC) 1907/2006/EC concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency

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8. TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated February 2007
9. Announcement 220 (DE), Safety Data Sheet, September 2007
10. TRGS 900, German engineering rules governing limits in air at work, updated January/December 2006
11. SUVA.CH, Limits in air at work 2009, revised on 01.2009
12. TRGS 905, German engineering rules governing carcinogens and mutagens, updated May 2008

15.3 Other national regulations

DE: Water hazard class: WGK 3

16. Other information

R references

- R 45 May cause cancer
R 46 May cause heritable genetic damage
R 35 Causes severe burns
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed
R 33 Danger of cumulative effects
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in aquatic environment

S references

- S 13 Keep away from food, drink and animal feedingstuffs
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S 28 After contact with skin, wash immediately with plenty of water
S 60 This material and its container must be disposed of as hazardous waste
S 61 Avoid release into the environment. Obtain special instructions / safety data sheets

Recommended usage and restriction: only for trained staff

Look about employee restrictions for young people, pregnant women and nursing women.

An individual package of this product or test kit has a moderate hazardous potential.

You find our current versions of MSDS in Internet:

www.mn-net.com link „Services“

Bibliographical sources

KÜHN, BIRETT: Merkblätter Gefährliche Arbeitsstoffe S 012, K 007,(Q 002)
(Data Sheets of Hazardous Substances)

Reason for alteration: REACH Regulation 1907/2006/EC, RIP 3.2

Further information from

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