

# Safety Data Sheet

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

REF: 985063	NANOCOLOR Sulfate HR 1000	Page: 1/8
Printing date: 12.01.2023	Date of issue: 20.07.2022	Version: 2.2.2.2

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

### 1.1 Product identifier

REF 985063  
 Product name NANOCOLOR Sulfate HR 1000

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.  
 20 x 3,0 mL SO<sub>4</sub> HR1000

### 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  
 Valencienner Str. 11, 52355 Düren, Germany  
 Phone: +49 2421 969 0  
 E-mail: sds@mn-net.com (msds@mn-net.com)

### 1.4 Emergency telephone number

Information not necessary.  
 You find our current versions of SDS in Internet:

<<http://www.mn-net.com/SDS>>

*Lieferant / Supplier:  
 Carl Roth GmbH + Co KG  
 Schöbenerstr. 3-5  
 76185 Karlsruhe, Germany  
 +49 721 5606 0  
 sicherheit@carlroth.de*

## SECTION 2: Hazard identification

### 2.0 Classification of the complete product according to Regulation (EC) 1272/2008

#### 2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008

**3,0 mL SO<sub>4</sub> HR1000**  
 Do not need labelling as hazardous  
 Signal word -  
 No hazard class

List of H phrases: see section 16.2

#### 2.2 Label elements according regulation (EC) 1272/2008

**3,0 mL SO<sub>4</sub> HR1000**  
 Do not need labelling as hazardous  
 Signal word: -

#### Label elements of the complete product

### 2.3 Other hazards

**Possible hazards from physicochemical properties**  
 According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit. An individual package has considerably less hazardous potential.



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Information pertaining to particular risks to human and possible symptoms

Information pertaining to particular risks to the environment

Possible endocrine disrupting effects

no data available

## SECTION 3: Composition / information on ingredients

### 3.1 Substances or 3.2 Mixtures

#### 3,0 mL SO<sub>4</sub> HR1000

Substance name: *ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)*  
CAS No.: 6381-92-6

Substance rating: H332, Acute Tox. 4 inh., H373, STOT SE 3  
Formula: C<sub>10</sub> H<sub>14</sub> N<sub>2</sub> Na<sub>2</sub> O<sub>8</sub> • 2 H<sub>2</sub> O  
Pseudonym (de): Titriplex® III  
EC No.: 205-358-3  
Concentration: 1 - <5 %  
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *barium chloride*  
CAS No.: 10361-37-2

Substance rating: H301, Acute Tox. 3 oral, H332, Acute Tox. 4 inh.  
Formula: BaCl<sub>2</sub>  
Pseudonym (de): Bariumdichlorid, Chlorbarium  
REACH Reg. No.: 01-2119502547-42-xxxx  
EC No.: 233-788-1  
Concentration: 1 - <2,5 %  
The classification refers to the weight percentage of the metal (according to CLP regulation 2008/1272/EG Annex VI, 1.1.3.2 Note 1)  
acc. CLP (GHS): The criteria for classification are not fulfilled.

Indice No.: 056-004-00-8

Correlation factor: x 0.66 (= %Ba)

### 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 16.2.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately.

#### 4.1.1 After SKIN Contact

Not necessary.

#### 4.1.2 After EYE Contact

Not necessary.

#### 4.1.3 After INHALATION of vapours

Not necessary. ---

#### 4.1.4 After ORAL Intake

Not necessary.

### 4.2 Most important symptoms and effects, both acute and delayed

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

No additionally recommendations. ---



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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### 5.1.1 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. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used. 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.

#### 5.1.2 Unsuitable extinguishing media

no data available

### 5.2 Special hazards arising from the substance or mixture

None.

### 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. Not necessary.

### 6.2 Environmental precautions

not necessary

### 6.3 Methods and material for containment and cleaning up

Clean working area with water. Flush used water into drains.

### 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. Use a safety bottle when shaking test tubes.

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

Safe storage is guaranteed in the original packaging. Storage class (German chemical industry): see chapter 12.1

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.

### 7.3 Specific end use(s)

Product for analytical use.

## SECTION 8: Exposure controls /personal protection

### 8.1 Control parameters

#### 3,0 mL SO<sub>4</sub> HR1000

Chemical: ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)

CAS No.: 6381-92-6

DNEL: [inh] 1.5 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 2.2 mg/L

PNEC = Predicted No Effect Concentration

Chemical: barium chloride

CAS No.: 10361-37-2

EU value: 0.5 Ba e mg/m<sup>3</sup>

TRGS 900 (DE): 0,5 Ba E mg/m<sup>3</sup>

E/e respirable

Short-term exposure factor: 1 (1)



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

SUVA(CH) MAK value:	0,5 e mg/m <sup>3</sup>
NIOSH:	TWA 0.5 Ba 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 0.5 Ba mg/m <sup>3</sup>

## 8.2 Exposure controls

Not necessary. Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities.

### 8.2.1 Respiratory protection

Not necessary.

### 8.2.2 Skin protection / Hand protection

Not necessary.

### 8.2.3 Eye / Face Protection

Not necessary.

### 8.2.4 Skin protection

Not necessary.

### 8.2.5 Personal hygiene

Information not necessary.

### 8.2.6 Thermal hazards

no data available

## 8.3 Limitation and monitoring of environmental exposure

Information not necessary.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### 3,0 mL SO<sub>4</sub> HR1000

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (o/w):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

### 9.2 Other information

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.

**Properties relevant to substance groups**

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None



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## 10.2 Chemical stability

no known instability.

## 10.3 Possibility of hazardous reactions

None.

## 10.4 Conditions to avoid

Observe the storage temperature printed on it. Not known.

## 10.5 Incompatible materials

Not known.

## 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 the hazard classes according regulation (EC) 1272/2008

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

#### 3,0 mL SO<sub>4</sub> HR1000

Chemical: *ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6  
 TSCA Inventory: listed (CAS 139-33-3)  
 LD50 orl rat : 2800 mg/kg

Chemical: *barium chloride* CAS No.: 10361-37-2  
 TSCA Inventory: listed  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system, heart, central nervous system  
 Symptoms: irritation eyes, skin, upper respiratory system; skin burns; gastroenteritis; muscle spasm; slow pulse, extrasystoles; hypokalemia  
 Japan CSCL/PRTR: not listed, Japan PDSCCL: Deleterious substance  
 Japan ISHL: listed ≥1,0%/≥1,0%  
 Korea Exist.Chem.Inventory: KE-02037  
 LD50 orl rat : 118 mg/kg  
 LC<sub>Low</sub> orl hmn : 11,4 mg/kg

### 11.2 Other hazards

**Possible endocrine disrupting effects**  
 no data available

**Other information**  
 no additional data available

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 3,0 mL SO<sub>4</sub> HR1000

Chemical: *ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6  
 PNEC (fresh water) : 2.2 mg/L  
 PNEC = Predicted No Effected Concentration  
 LC50 fish/96h : [4d] 41-1592 mg/L  
 EC50 daphnia/48h : 140 mg/L  
 IC50 scenedesmus quadricauda/72h : [72h] 2.77-1000 mg/L  
 EC10 pseudomonas putita/16h : [EC10, 30h] 500 mg/L  
 Water hazard class (DE): 2  
 Dispersion coefficient (o/w) : -4,3  
 Storage class (VCI): 12-13



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Chemical:	<i>barium chloride</i>	CAS No.: 10361-37-2
LC50 leuciscus idus/96h :	870 mg/L	
EC50 daphnia/48h :	21.9 mg/L	
Water hazard class (DE):	1	WGK No.: 0025
Storage class (VCI):	6.1 B	

**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**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

**12.6 Endocrine disrupting properties**

no data available

**12.7 Other adverse effects**

no additional data available

## SECTION 13: Disposal considerations

Not necessary.

**13.1 Waste treatment methods**

GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Not necessary, see above.

## SECTION 14: Transport information

14.1 - 14.4 Not necessary

**14.5 Environmental hazards**

none

**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**

Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020  
 Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017  
 MN leaflet/instructions for use, also at [www.mn-net.com](http://www.mn-net.com)  
 If necessary, observe other country-specific regulations.

**15.2 Chemical safety assessment**

## SECTION 16: Other information

**16.1 Changes compared to the last version**

in preparation

**16.2 List of H and P phrases**



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**16.2.1 List of relevant H phrases**

**16.2.2 List of relevant P phrases**

**16.3 Recommended restriction on use**

None

**16.4 Sources of key data**

- KÜHN, BIRETT, Leaflets on hazardous materials, 2021
- Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres
- SUVA .CH, limit values in the air at work 2009, revised on 01/2009
- Regulation 790/2009/EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st ATP)
- Regulation 453/2010/EU, adaptation of the REACH regulation 1907/2006/EG
- Regulation 487/2013/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th ATP)
- Regulation 1221/2015/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th ATP)
- Regulation 776/2017/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (10th ATP)
  
- Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progressText (11th ATP)
- Regulation 1480/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (13th ATP)
- Regulation 521/2019/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (12th ATP)
- TRGS 900, German rules of technology on limit values in the air at work, as of 03/2019
- Regulation 217/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (14th ATP)
- Regulation 878/2020/EU, adaptation of Annex II of the REACH regulation 1907/2006/EG
- Regulation 1182/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (15th ATP)
- Regulation 643/2021/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (16th ATP)
- Regulation 849/2021/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (17th ATP)

**revisions/updates**

- Reason for revision:*
- 2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary
  - 2014-04 adjustment according Regulation 487/2013/EU
  - 2016-03 adjustment according Regulation 1221/2015/EU
  
  - 2017-11 adjustment according the ECHA registration dossier
  - 2022-11 adjustment according Regulation 878/2020/EU

**16.5 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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**16.6 Legend / Abbreviations**

- acc: according
- ADR: Convention concerning the International Carriage of Dangerous Goods by Road
- Act: acute
- BAT: biological workplace tolerance value
- CAO: Cargo Aircraft Only
- Carc: carcinogen
- CAS: Chemical Abstracts Service
- CLP: Classification, Labelling and Packaging regulation
- CMR: carcinogen, mutagen, reproduction toxic
- Corr: corrosive
- COD: chemical oxigen demand
- CSCL: Chemical Substance Control Law (Jp)
- Dam: damage
- DNEL: Derived No-Effect Level (for workers)
- derm: dermal
- dog: dog
- EC10: Concentration causing a toxic effect in 10% of the test organisms
- EC: European Community
- EC-Nr: Substance number of the EC substance inventory
- EmS: Guide to accident management measures on ships
- EU: European Union
- fish: fish (not spezified)
- GHS: Global Harmonized System of Classification and Labeling of Chemicals



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- gpg: guinea pig
- ICAO: International Civil Aviation Organization
- ihl: inhaled
- IMDG: International Maritime Dangerous Goods Code
- intrav: intravenous
- ipt: intraperitoneal
- ISHL: Industrial Safety and Health Law (Jp)
- LC50: letale concentration 50%
- LD50: letale dosis 50%
- leuciscus idus: fisch, ide, orfe
- MAK: maximum workplace concentration
- Met: Metall
- mus: mouse
- Muta: mutagen
- NIOSH: National Institute for Occupational Safety and Health (US)
- NRD: Non-rapidly degradable
- onchorhynchus mykiss: fish, rainbow trout
- orl: oral
- OSHA: Occupational Safety and Health Administration
- PAX: transport on passenger planes allowed
- PBT: persistent, bioaccumulating, toxic substance
- pH: pH value
- pimephales promelas: fish, fathead minnow
- PNEC: Predicted No Effect Concentration
- PROC 15: Process category 'for laboratory use'
- PRTR: Law for PRTR and Promotion of Chemical Management (Jp)
- PVC: polyvinyl chloride
- quail: bird, quail
- rat: rat
- rbt: rabbit
- RD: rapidly degradable
- RE: repeated
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- REF: item number, reference number
- Reg.No.: rRegistration number
- Repr: harmful to reproduction
- Resp: respiratory
- RIP: REACH Implementations Projects
- scu: sub cutan
- SDS: safety data sheet
- Sens: sensitisation
- STEL: short term exposure limit
- STOT: Specific Target Organ Toxicity
- SVHC: Substance of Very High Concern
- t/a: tons per year
- TCCA: Toxic Chemicals Control Act (S. Korea)
- Tox: toxic
- TSCA: The Toxic Substances Control Act (US)
- TWA: time weighted average
- TRGS: technical regulations (DE)
- vPvB: very persistent, very bioaccumulating substance

## 16.7 Training advice

Regular safety training. 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.



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