

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 1 of 11

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

1.1. Product identifier

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

UFI: T5MG-520Q-A00M-QM0A

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Laboratory chemical

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household). No data available

1.3. Details of the supplier of the safety data sheet

| | | |
|-------------------------|---------------------------------|------------------------------|
| Company name: | Fa. Bernd Kraft GmbH | |
| Street: | Stempelstraße 6 | |
| Place: | D-47167 Duisburg | |
| Telephone: | 0203/5194-0 | Telefax: 0203/5194-290 |
| e-mail: | info@berndkraft.de | |
| Contact person: | Abteilung Produktsicherheit | Telephone: 0203/5194-107/117 |
| e-mail: | produktsicherheit@berndkraft.de | |
| Internet: | www.berndkraft.de | |
| Responsible Department: | Abteilung Produktsicherheit | |

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Met. Corr. 1; H290

Skin Irrit. 2; H315

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



Hazard statements

H290 May be corrosive to metals.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 2 of 11

Precautionary statements

- P280 Wear protective gloves and eye/face protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Hazardous components

| CAS No | Chemical name | | | Quantity |
|------------|---------------------------------------------------------------------------------------------------------------|--------------|------------------|----------|
| | EC No | Index No | REACH No | |
| | Classification (Regulation (EC) No 1272/2008) | | | |
| 1310-73-2 | sodium hydroxide | | | < 1 % |
| | 215-185-5 | 011-002-00-6 | 01-2119457892-27 | |
| | Met. Corr. 1, Skin Corr. 1A; H290 H314 | | | |
| 51580-86-0 | sodium dichloroisocyanurate, dihydrate | | | < 1 % |
| | 220-767-7 | 613-030-01-7 | 01-2119489371-33 | |
| | Acute Tox. 4, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H302 H319 H335 H400 H410 EUH031 | | | |

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity |
|------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------|
| | Specific Conc. Limits, M-factors and ATE | | |
| 1310-73-2 | 215-185-5 | sodium hydroxide | < 1 % |
| | Skin Corr. 1A; H314: >= 5 - 100 Skin Corr. 1B; H314: >= 2 - < 5 Skin Irrit. 2; H315: >= 0,5 - < 2 Eye Irrit. 2; H319: >= 0,5 - < 2 | | |
| 51580-86-0 | 220-767-7 | sodium dichloroisocyanurate, dihydrate | < 1 % |
| | inhalation: LC50 = > 0,27 - < 1,17 mg/l (dusts or mists); dermal: LD50 = > 5000 mg/kg; oral: LD50 = 2094 mg/kg | | |

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.

After contact with skin

Take off immediately all contaminated clothing and wash it before reuse.
 Wash immediately with: Water
 In case of skin irritation, consult a physician.

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 3 of 11

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Avoid contact with skin, eyes and clothes.

Additional information

Suppress gases/vapours/mists with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Corrosive to metals.

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

No special environmental measures are necessary.

6.3. Methods and material for containment and cleaning up

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 4 of 11

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Read label before use.
Do not breathe vapour/aerosol.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Take off immediately all contaminated clothing and wash it before reuse.
If handled uncovered, arrangements with local exhaust ventilation have to be used.
Draw up and observe skin protection programme. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.
Unsuitable container/equipment material:
Metal
Aluminium
Tin
Zinc

Further information on storage conditions

Store in a dry place.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

| CAS No | Substance | ppm | mg/m ³ | fib/cm ³ | Category | Origin |
|-----------|------------------|-----|-------------------|---------------------|---------------|--------|
| 1310-73-2 | Sodium hydroxide | - | 2 | | STEL (15 min) | |

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 5 of 11

DNEL/DMEL values

| CAS No | Substance | | |
|--------------------------|----------------------------------------|----------|------------------------|
| DNEL type | Exposure route | Effect | Value |
| 1310-73-2 | sodium hydroxide | | |
| Worker DNEL, long-term | inhalation | local | 1 mg/m ³ |
| Consumer DNEL, long-term | inhalation | local | 1 mg/m ³ |
| 51580-86-0 | sodium dichloroisocyanurate, dihydrate | | |
| Worker DNEL, long-term | inhalation | systemic | 8,11 mg/m ³ |
| Worker DNEL, long-term | dermal | systemic | 2,3 mg/kg bw/day |
| Consumer DNEL, long-term | inhalation | systemic | 1,99 mg/m ³ |
| Consumer DNEL, long-term | dermal | systemic | 1,15 mg/kg bw/day |
| Consumer DNEL, long-term | oral | systemic | 1,15 mg/kg bw/day |

PNEC values

| CAS No | Substance | |
|--------------------------------------------------|----------------------------------------|--|
| Environmental compartment | Value | |
| 51580-86-0 | sodium dichloroisocyanurate, dihydrate | |
| Freshwater | 0 mg/l | |
| Freshwater (intermittent releases) | 0,002 mg/l | |
| Marine water | 1,52 mg/l | |
| Freshwater sediment | 7,56 mg/kg | |
| Micro-organisms in sewage treatment plants (STP) | 0,59 mg/l | |
| Soil | 0,756 mg/kg | |

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Do not breathe vapour/aerosol.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 6 of 11

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|------------------|----------------|
| Physical state: | Liquid |
| Colour: | colourless |
| Odour: | odourless |
| Odour threshold: | not determined |

Changes in the physical state

| | |
|-----------------------------------------------------------|----------------|
| Melting point/freezing point: | not determined |
| Boiling point or initial boiling point and boiling range: | not determined |
| Sublimation point: | not determined |
| Softening point: | not determined |
| Pour point: | not determined |
| not determined: | |
| Flash point: | X |

Flammability

| | |
|---------------|----------------|
| Solid/liquid: | not applicable |
| Gas: | not applicable |

Explosive properties

not determined

| | |
|----------------------------|----------------|
| Lower explosion limits: | not determined |
| Upper explosion limits: | not determined |
| Auto-ignition temperature: | not determined |

Self-ignition temperature

| | |
|--------|----------------|
| Solid: | not applicable |
| Gas: | not applicable |

Decomposition temperature: not determined

pH-Value (at 20 °C): 13,1

Viscosity / dynamic: not determined

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 7 of 11

| | |
|----------------------------------------|--------------------------|
| Viscosity / kinematic: | not determined |
| Flow time: | not determined |
| Water solubility: | very soluble |
| Solubility in other solvents | |
| not determined | |
| Partition coefficient n-octanol/water: | not determined |
| Vapour pressure: | not determined |
| Vapour pressure: | not determined |
| Density (at 20 °C): | 1,0098 g/cm ³ |
| Bulk density: | not determined |
| Relative vapour density: | not determined |

9.2. Other information

Information with regard to physical hazard classes

| | |
|------------------------|-------------------|
| Sustaining combustion: | No data available |
| Oxidizing properties | |
| Not oxidising. | |

Other safety characteristics

| | |
|--------------------------|----------------|
| Solvent separation test: | not determined |
| Solvent content: | 0 |
| Solid content: | 0 |
| Evaporation rate: | not determined |

Further Information

Corrosive to metals.

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Metal
Aluminium
Tin
Zinc

10.6. Hazardous decomposition products

No known hazardous decomposition products.

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 8 of 11

Toxicokinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

| CAS No | Chemical name | | | | |
|------------|----------------------------------------|---------------------------|---------|---------------------|--------------------|
| | Exposure route | Dose | Species | Source | Method |
| 51580-86-0 | sodium dichloroisocyanurate, dihydrate | | | | |
| | oral | LD50 2094 mg/kg | Rat | Study report (1985) | EPA OPP 81-1 |
| | dermal | LD50 > 5000 mg/kg | Rat | Study report (1984) | EPA OPP 81-2 |
| | inhalation (4 h) dust/mist | LC50 > 0,27 - < 1,17 mg/l | Rat | Study report (1985) | OECD Guideline 403 |

Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.
slightly irritant but not relevant for classification.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards

Other information

There are no data available on the mixture itself.

Further information

There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 9 of 11

| CAS No | Chemical name | | | | | |
|------------|----------------------------------------|---------------|-----------|---------|-----------------------------------------------------|--------------------------------------------------------------------------------------|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 1310-73-2 | sodium hydroxide | | | | | |
| | Acute crustacea toxicity | EC50 mg/l | 40,4 | 48 h | Ceriodaphnia sp. | Ecotoxicology and Environmental Safety,4 other: acute 48-h immobilization test ac |
| 51580-86-0 | sodium dichloroisocyanurate, dihydrate | | | | | |
| | Acute fish toxicity | LC50 mg/l | 0,24 | 96 h | Oncorhynchus mykiss | Study report (1987) EPA OTS 797.1400 |
| | Acute algae toxicity | ErC50 mg/l | > 100 | 72 h | Skeletonema costatum | Study report (2009) ISO 10253 |
| | Acute crustacea toxicity | EC50 mg/l | 0,196 | 48 h | Daphnia magna | Study report (1978) other: Methods for acute toxicity tests |
| | Fish toxicity | NOEC mg/l | 1000 | 28 d | Oncorhynchus mykiss | Study report (2007) OECD Guideline 215 |
| | Crustacea toxicity | NOEC | 160 mg/l | 21 d | Daphnia magna | Study report (2007) OECD Guideline 211 |
| | Acute bacteria toxicity | (EC50 | 51 mg/l) | 3 h | activated sludge of a predominantly domestic sewage | Study report (2002) OECD Guideline 209 |

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|------------|----------------------------------------|---------|
| 51580-86-0 | sodium dichloroisocyanurate, dihydrate | -0,056 |

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

There are no data available on the mixture itself.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 10 of 11

Land transport (ADR/RID)

| | |
|------------------------------------------|---------------------------|
| 14.1. UN number or ID number: | UN 1824 |
| 14.2. UN proper shipping name: | SODIUM HYDROXIDE SOLUTION |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| Classification code: | C5 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |
| Transport category: | 3 |
| Hazard No: | 80 |
| Tunnel restriction code: | E |

Inland waterways transport (ADN)

| | |
|------------------------------------------|---------------------------|
| 14.1. UN number or ID number: | UN 1824 |
| 14.2. UN proper shipping name: | SODIUM HYDROXIDE SOLUTION |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| Classification code: | C5 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |

Marine transport (IMDG)

| | |
|------------------------------------------|---------------------------|
| 14.1. UN number or ID number: | UN 1824 |
| 14.2. UN proper shipping name: | SODIUM HYDROXIDE SOLUTION |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| Special Provisions: | 223 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |
| EmS: | F-A, S-B |
| Segregation group: | alkalis |

Air transport (ICAO-TI/IATA-DGR)

| | |
|------------------------------------------|---------------------------|
| 14.1. UN number or ID number: | UN 1824 |
| 14.2. UN proper shipping name: | SODIUM HYDROXIDE SOLUTION |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| Special Provisions: | A3 A803 |
| Limited quantity Passenger: | 1 L |
| Passenger LQ: | Y841 |
| Excepted quantity: | E1 |
| IATA-packing instructions - Passenger: | 852 |
| IATA-max. quantity - Passenger: | 5 L |
| IATA-packing instructions - Cargo: | 856 |
| IATA-max. quantity - Cargo: | 60 L |

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

Reagent green NaOH / dichloroisocyanurate for online TOC analysis in Metrohm analyzers

Revision date: 07.07.2021

Product code: 28026

Page 11 of 11

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Water hazard class (D): - - non-hazardous to water

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

| Classification | Classification procedure |
|---------------------|--------------------------|
| Met. Corr. 1; H290 | On basis of test data |
| Skin Irrit. 2; H315 | Calculation method |
| Eye Irrit. 2; H319 | Calculation method |

Relevant H and EUH statements (number and full text)

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- EUH031 Contact with acids liberates toxic gas.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)