

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2021

Reviewed on 12/22/2021

1 Identification

- **Product identifier**
- **Trade name:** Grotanol FF 1 N
- **Article number:** 43440
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **Emergency telephone number:**
Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

SERVA
■ serving scientists ■

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS05, GHS07
- **Signal word** Danger

- **Hazard-determining components of labeling:**

Isotridecanol, ethoxylated (>1<2,5 mol EO)

1,2-benzisothiazol-3(2H)-one

- **Hazard statements**

Causes skin irritation.

Causes serious eye damage.

May cause an allergic skin reaction.

- **Precautionary statements**

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin: Wash with plenty of soap and water.

Immediately call a poison center/doctor.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Take off contaminated clothing and wash it before reuse.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2021

Reviewed on 12/22/2021

Trade name: Grotanol FF 1 N

(Contd. of page 1)

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

| | | |
|------------|---|----------------|
| HEALTH | 3 | Health = *3 |
| FIRE | 1 | Fire = 1 |
| REACTIVITY | 0 | Reactivity = 0 |

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** liquid microbiocidal system cleaner

- **Dangerous components:**

| | | |
|-------------|---|----------|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | 5-15% |
| 9043-30-5 | Isotridecanol, ethoxylated (>1<2,5 mol EO) | 2.5-7% |
| 111905-53-4 | alcohols, C13-15-branched and linear, butoxylated ethoxylated | 2.5-7% |
| 2634-33-5 | 1,2-benzisothiazol-3(2H)-one | 0.5-1.5% |
| 2372-82-9 | N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine | 0.5-1.5% |
| 1310-58-3 | potassium hydroxide | 0.5-1.5% |
| 3811-73-2 | pyridine-2-thiol 1-oxide, sodium salt | 0.1-0.2% |

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediate wash with copious amounts of water and soap; rinse thoroughly; seek medical advice.
- **After eye contact:**
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist immediately.
- **After swallowing:**
Wash out mouth instantly. Drink copious amounts of water and provide fresh air. Call for doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂ extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2021

Reviewed on 12/22/2021

Trade name: Grotanol FF 1 N

(Contd. of page 2)

- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Avoid contact with the eyes and skin.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

| | | |
|-----------|---------------------------|------------------------|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | 30 ppm |
| 1310-58-3 | potassium hydroxide | 0.18 mg/m ³ |

· **PAC-2:**

| | | |
|-----------|---------------------------|---------------------|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | 33 ppm |
| 1310-58-3 | potassium hydroxide | 2 mg/m ³ |

· **PAC-3:**

| | | |
|-----------|---------------------------|----------------------|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | 200 ppm |
| 1310-58-3 | potassium hydroxide | 54 mg/m ³ |

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed and store in dry conditions.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2021

Reviewed on 12/22/2021

Trade name: Grotanol FF 1 N

(Contd. of page 3)

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

| | |
|---|---|
| 112-34-5 2-(2-butoxyethoxy)ethanol (5-15%) | |
| TLV | Long-term value: 10* ppm *Inhalable fraction and vapor |
| 1310-58-3 potassium hydroxide (0.5-1.5%) | |
| REL | Ceiling limit value: 2 mg/m ³ |
| TLV | Ceiling limit value: 2 mg/m ³ |

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

- **Breathing equipment:**

Short term filter device:

Filter ABEK/ P3

- **Protection of hands:**

Protective gloves

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

- **Eye protection:** Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid

Color: yellowish

- **Odor:** Characteristic

- **Odor threshold:** Not determined.

- **pH-value at 20 °C (68 °F):** 9

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2021

Reviewed on 12/22/2021

Trade name: Grotanol FF 1 N

(Contd. of page 4)

| | |
|---|--|
| · Change in condition | |
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | Undetermined. |
| · Flash point: | >100 °C (>212 °F) |
| · Flammability (solid, gaseous): | Not applicable. |
| · Decomposition temperature: | Not determined. |
| · Auto igniting: | Product is not selfigniting. |
| · Danger of explosion: | Not determined. |
| · Explosion limits: | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| · Vapor pressure: | Not determined. |
| · Density at 20 °C (68 °F): | 1.022 g/cm ³ (8.52859 lbs/gal) |
| · Relative density | Not determined. |
| · Vapor density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: | Fully miscible. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 7.5 % |
| VOC content: | 7.50 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No further relevant informations available.
- **Conditions to avoid high temperatures**
- **Incompatible materials:** Avoid contact with strong oxidizers and reducing agents.
- **Hazardous decomposition products:** In case of fire: See Section 5

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2021

Reviewed on 12/22/2021

Trade name: Grotanol FF 1 N

(Contd. of page 5)

Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Harmful to fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Disposal must be made according to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:**

Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN3082

· **UN proper shipping name**

· **DOT**

Environmentally hazardous substance, liquid, n.o.s. (pyridine-2-thiol 1-oxide, sodium salt, N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2021

Reviewed on 12/22/2021

Trade name: Grotanol FF 1 N

(Contd. of page 6)

| | |
|--|---|
| <ul style="list-style-type: none"> · ADR · IMDG · IATA | <p>3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pyridine-2-thiol 1-oxide, sodium salt, N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pyridine-2-thiol 1-oxide, sodium salt, N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine), MARINE POLLUTANT</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pyridine-2-thiol 1-oxide, sodium salt, N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)</p> |
|--|---|

- **Transport hazard class(es)**
- **DOT, ADR, IMDG, IATA**



- **Class** 9 Miscellaneous dangerous substances and articles
- **Label** 9

- **Packing group** III
- **DOT, ADR, IMDG, IATA** III

- **Environmental hazards:** Product contains environmentally hazardous substances: pyridine-2-thiol 1-oxide, sodium salt, N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine
- **Marine pollutant:** Yes (DOT)
Symbol (fish and tree)
- **Special marking (ADR):** Symbol (fish and tree)
- **Special marking (IATA):** Symbol (fish and tree)

- **Special precautions for user** Warning: Miscellaneous dangerous substances and articles

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

- **Transport/Additional information:**

- **DOT**
- **Remarks:** Special marking with the symbol (fish and tree).

- **UN "Model Regulation":** UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PYRIDINE-2-THIOL 1-OXIDE, SODIUM SALT, N-(3-AMINOPROPYL)-N-DODECYLPROPANE-1,3-DIAMINE), 9, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

112-34-5 2-(2-butoxyethoxy)ethanol

- **TSCA (Toxic Substances Control Act):**

112-34-5 2-(2-butoxyethoxy)ethanol

ACTIVE

9043-30-5 Isotridecanol, ethoxylated (>1<2,5 mol EO)

ACTIVE

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2021

Reviewed on 12/22/2021

Trade name: Grotanol FF 1 N

(Contd. of page 7)

| | | |
|-----------|--|--------|
| 2634-33-5 | 1,2-benzisothiazol-3(2H)-one | ACTIVE |
| 2372-82-9 | N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine | ACTIVE |
| 1310-58-3 | potassium hydroxide | ACTIVE |
| 3811-73-2 | pyridine-2-thiol 1-oxide, sodium salt | ACTIVE |

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

None of the ingredients is listed.

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** GHS05, GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Isotridecanol, ethoxylated (>1<2,5 mol EO)

1,2-benzisothiazol-3(2H)-one

· **Hazard statements**

Causes skin irritation.

Causes serious eye damage.

May cause an allergic skin reaction.

· **Precautionary statements**

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin: Wash with plenty of soap and water.

Immediately call a poison center/doctor.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Take off contaminated clothing and wash it before reuse.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product safety department

· **Contact:** +49 6221 13840-35

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2021

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Trade name: Grotanol FF 1 N

(Contd. of page 8)

· **Date of preparation / last revision** 12/22/2021 / 2

· **Abbreviations and acronyms:**

PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

CLP: Regulation on classification, labelling and packaging of substances and mixtures

bw: body weight

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1