SAFETY DATA SHEET

REMACID

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1. Product identifier
 - Product name REMACID
- 1.2. Relevant identified uses of the substance or mixture and uses advised against Identified uses **Drilling fluid additive. Biocide**.
- 1.3. Details of the supplier of the safety data sheet

Company: NPP "KF" PC 404117 Alexandrova str, 100A Volzhskiy Volgograd region Russia Tel: +7(8443) 52-51-34

Emergency Telephone No: +7(8443) 52-51-34 rosfloc@rosfloc.ru

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture Classification according to (EC) No. 1272/2008

Health hazards

Acute oral toxicity	Category 3
Acute inhalation toxicity - gas	Category 1
Acute inhalation toxicity - dust/mist	Category 1
Skin corrosion/irritation	Category 1 Subcategory 1B
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity	Category 3
(single exposure)	

Environmental hazards

Acute aquatic toxicity	Category 1
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2.2. Label elements Signal Word: DANGER



Hazard statements

- H301 Toxic if swallowed
- H314 Causes severe skin burns and eye damage
- H317 May cause an allergic skin reaction
- H330 Fatal if inhaled
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H400 - Very toxic to aquatic life

May cause respiratory irritation. May cause drowsiness or dizziness

EU specific hazard statements

EUH208 - Contains Gluteraldehyde. May produce an allergic reaction

Precautionary statements - EU (28, 1272/2008)

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P310 - Immediately call a POISON CENTER or doctor/ physician

P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention

P501 - Dispose of contents/container in accordance with local regulations.

Supplementary precautionary statements

P270 - Do not eat, drink or smoke when using this product

P271 - Use only outdoors or in a well-ventilated area

P272 - Contaminated work clothing should not be allowed out of the workplace

P273 - Avoid release to the environment

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

P284 - Wear respiratory protection

P285 - In case of inadequate ventilation wear respiratory protection

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician

P302 + P352 - IF ON SKIN: Wash with plenty of soap and 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

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician

P363 - Wash contaminated clothing before reuse

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

GLUTARALDEHYDE CAS-No.: 111-30-8 10-30%

Classification (67/548/EEC) T; R23/25 C; R34 R42/43 N; R50 Classification (EC 1272/2008) Acute Tox. 3 (H301) Skin Corr. 1B (H314) par Skin Sens. 1 (H317) Aqute Tox. 3 (H331) par Resp. Sens 1 (H334) Aquatic Acute 1 (H400)

TRIETHANOLAMINE CAS-No.: 102-71-6

EC No.: 203-049-8

EC No.: 203-856-5

10-30%

Classification (67/548/EEC)

Xi, R 36/37/38-36

Classification (EC 1272/2008) Skin irrit. (H315); Eye Irrit (H319) WATER

EC No.: 231-791-2

30-60%

Classification (67/548/EEC)

CAS-No.: 7732-18-5

Classification (EC 1272/2008)

The Full Text for all Hazard Statements are Displayed in Section 16.

Composition Comments

Composition of high-molecular esters and functional additives.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

<u>General advice:</u> The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms developes described the casualty should be transferred to hospital as soon as possible.

Inhalation: If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult. If breathing has stopped, begin artificial respiration. Seek medical attention at once.

<u>Contact with the eyes:</u> Remove contact lenses. Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.

<u>Contact with the skin</u>: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Seek medical attention at once.

Ingestion: Rinse mouth. If conscious, drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention at once.

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

Inhalation.

Harmful if inhaled. Can cause respiratory tract irritation and sudden headaches, nausea, and vomiting, chest pain, coryza, epistaxis when exposed to vapor or mist. May cause asthma. May also affect.

Ingestion

Harmful if swallowed. May cause severe irritation of the digestive tract with burning sensation in the chest, abdominal pain, cramping, vomiting, diarrhea (perhaps bloody diarrhea), vascular collapse, and coma. May also affect liver (increased liver enzymes, liver damage), spleen, blood (normocytic anemia), metabolism (weight loss), behavior (somnolence, excitement, dizziness, lethargy, ataxia, seizures), metabolism (weight loss), urinary system (abnormal reneal function, anuria)

<u>Skin contact</u> Causes moderate to severe skin irritation. It may be absorbed through the skin, although poorly. May cause allergic contact dermatitis with itching and skin rash. May cause staining of the skin and nails to a brown or golden brown color <u>Eve contact</u>

Causes severe eye irritation. May cause eye injury or chemical conjunctivitis.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Water Fog, Alcohol Foam, CO2, Dry Chemical

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Combustion products may include the following: carbon oxides (CO, CO2) (carbon monoxide, carbon dioxide)

5.3. Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Special Fire-Fighting Procedures

Containers close to fire should be removed immediately or cooled with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

Enviromental exposure controls

Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. After cleaning, flush away traces with water.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Avoid spills and splashing during use.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. When using do not smoke, eat or drink. Wash hands and face before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation. Keep airborne concentrations below exposure limits. Keep away from oxidizing agents, strongly acid or alkaline materials and amines.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place.

Storage class Chemical storage.

Packaging material Use specially constructed containers only

Packaging materials to be avoided Metal Copper Aluminium

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	Std	TWA - 8 hrs		STEL - 15 r	nin	Notes
GLUTARALDEHYDE	WEL	0,05 ppm	0,2 mg/m3	0,05 ppm	0,2 mg/m3	Sen
TRIETHANOLAMINE	WEL	200 ppm	266 mg/m3	250 ppm	333 mg/m3	Sk

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through skin.

Sen = Capable of causing occupational asthma.

8.2. Exposure controls <u>Protective equipment</u> <u>Process conditions</u>

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering measures to reduce exposure

Ensure adequate ventilation.

Personal protective equipment

Eve protection It is good practice to wear goggles when handling any chemical. Tightly fitting safety goggles.

<u>Hand protection</u> Use protective gloves made of:, Nitrile, Butyl, Rubber gloves, Be aware that liquid may penetrate the gloves. Frequent change is advisable.

<u>Respiratory protection</u> No personal respiratory protective equipment normally required, In case of insufficient ventilation wear suitable respiratory equipment, Type A/P2.

Skin and body protection Wear suitable protective clothing, Provide eyewash station.

<u>Hygiene measures</u> Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

 9.1. Information on basic physical and chemical properties

 <u>Appearance</u>
 Liquid

 <u>Colour</u>
 from greenish

 <u>Odour</u>
 Specific

 <u>Solubility</u>
 Completely so

 <u>Relative density</u>
 1.1 - 1.2 g/cm²

 <u>pH-value (1% solution)</u>
 8.5-9.5

 AUTO IGNITION
 TEMPERATURE (°C)

Liquid from greenish yellow to dark brown Specific Completely soluble in water 1.1 - 1.2 g/cm3 @ 20 °C 8.5-9.5

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Materials to be avoided:

Avoid contact with: Ammonia or amines. Strong acids. or Bases. Avoid contact with strong oxidisers.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Acute toxicity
Sensitization May cause sensitization by inhalation. May cause sensitization by skin contact.
Mutagenic effects This substance has no evidence of mutagenic properties.
Carcinogenicity This substance has no evidence of carcinogenic properties.
Reproductive toxicity None known.
Routes of exposure Skin contact. Inhalation. Ingestion. Eye contact.
Routes of entry Skin contact.
Specific target organ toxicity
(single exposure) Category 3
Specific target organ toxicity
(repeated exposure) Not classified.
Aspiration hazard No hazard from product as supplied.

SECTION 12: ECOLOGICAL INFORMATION 12.1 Toxicity Ecotoxicity effects VERY TOXIC TO AQUATIC ORGANISMS. Toxicity to algae See component information below. Toxicity to fish See component information below. Toxicity to daphnia and other aquatic invertebrates See component information below.

Glutaraldehyde	7.8 - 22 mg/L LC50 (Lepomis macrochirus) = 96 h 5.4 mg/L LC50 (Pimephales promelas) = 96 h 7.8 - 13 mg/L LC50 (Oncorhynchus mykiss) = 96 h 2.6 - 4.8 mg/L LC50 (Oncorhynchus mykiss) = 96 h	0.84 mg/L EC50 (Desmodesmus subspicatus) = 96 h 0.61 mg/L EC50 (Desmodesmus subspicatus) = 72 h	0.56 - 1.0 mg/L EC50 (Daphnia magna) = 48 h 14 mg/L EC50 (Daphnia magna) = 48 h
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12.2 Persistence and degradability

Readily biodegradable. **12.3 Bioaccumulative potential** Product has a low potential to bioconcentrate. Log Pow -0.333 **12.4 Mobility in soil** Mobility The product is water soluble, and may spread in water systems. **12.5 Results of PBT and vPvB assessment** Not classified as PBT/vPvB by current EU criteria. **12.6 Other adverse effects.**

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste from residues / unused products

Should not be released into the environment. Dispose of in accordance with local regulations.

Contaminated packaging

Dispose of in accordance with local regulations.

EWC Waste disposal No.

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: EWC waste disposal No: Waste Code:

SECTION 14: TRANSPORT INFORMATION

14.1. UN number ADR/RID: 3082 IMDG: 3082 IATA: 3082 14.2. UN proper shipping name Environmentally hazardous substance, liquid, n.o.s. 14.3. Transport hazard class(es) 9



14.4. Packing group III.

SECTION 15: REGULATORY INFORMATION

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

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

This safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008.

SECTION 16: OTHER INFORMATION

General information

HMIS Health -3 HMIS Flammability - 0 HMIS Physical Hazard - 0 <u>Information Sources</u> Product information provided by the commercial vendor(s). Material Safety Data Sheet, Misc. manufacturers. LOLI.

European Chemicals Bureau - ESIS (European Chemical Substances Information).

Revision Comments

General revision. Compiled or revised by

Issued By

Revision Date

20.04.2015

Hazard Statements In Full

H301 - Toxic if swallowed

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H330 - Fatal if inhaled

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H400 - Very toxic to aquatic life

May cause respiratory irritation. May cause drowsiness or dizziness

EUH208 - Contains Gluteraldehyde. May produce an allergic reaction

Disclaimer

MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We cannot make any assertions as to its reliability or completeness; therefore, user may rely only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.