

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

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

#### 1.1 Product identifier

Trade name : FELOSAN FDO NEU

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

Use of the Sub- : Textile auxiliary  
stance/Mixture Detergents

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier

CHT Germany GmbH  
Bismarckstraße 102  
72072 Tübingen  
Germany  
Tel.: +49 7071 154 0  
info@cht.com

CHT Switzerland AG  
Kriessernstrasse 20  
9462 Montlingen  
Switzerland  
Tel.: +41 71 763 88 11  
info.switzerland@cht.com

Importer : -  
-  
-  
-  
-  
-

Responsible Department : CHT Germany GmbH  
CHT Switzerland AG  
Product Safety  
sds.germany@cht.com  
sds.switzerland@cht.com

#### 1.4 Emergency telephone number

Emergency telephone : +49 7071 154 0 (Germany, 24 hours)  
number +41 71 763 88 11 (Switzerland, 24 hours)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3

H226: Flammable liquid and vapour.

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Chronic aquatic toxicity, Category 3	H412: Harmful to aquatic life with long lasting effects.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P280 Wear protective gloves/ eye protection/ face protection.

#### **Response:**

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:

Isotridecanol, ethoxylated

Orange, sweet, ext.

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

### 2.3 Other hazards

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.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Emulsified aliphatic hydrocarbon

#### Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Isotridecanol, ethoxylated	69011-36-5 Polymer	Eye Dam.1; H318 Aquatic Chronic3; H412	>= 30 - < 50
Orange, sweet, ext.	8028-48-6 232-433-8	Flam. Liq.3; H226 Skin Irrit.2; H315 Skin Sens.1; H317 Asp. Tox.1; H304 Aquatic Chronic2; H411	>= 20 - < 25
Isotridecanol, ethoxylated	69011-36-5 Polymer	Eye Dam.1; H318	>= 10 - < 20

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General advice : Take off all contaminated clothing immediately.  
Show this safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Keep patient warm and at rest.  
If unconscious, place in recovery position and seek medical advice.  
Consult a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.  
If symptoms persist, call a physician.

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

- In case of eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Call a physician immediately.
- If swallowed : Rinse mouth with water.  
Do NOT induce vomiting.  
Call a physician immediately.  
Never give anything by mouth to an unconscious person.

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

- Risks : Refer to section 2 and 11.

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

- Treatment : Treat symptomatically.

---

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Water spray jet  
Dry powder  
Alcohol-resistant foam
- Unsuitable extinguishing media : High volume water jet

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

- Specific hazards during fire-fighting : Vapours may spread long distances and ignite.  
Explosive properties  
Cool closed containers exposed to fire with water spray.  
Hazardous decomposition products formed under fire conditions.  
Can be released in case of fire:  
Carbon oxides  
acrylic monomers

### 5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : In case of fire do not inhale smoke, conflagration gases and steams.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

---

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.  
Ensure adequate ventilation, especially in confined areas.  
Vapors may spread long distances and ignite.  
Remove all sources of ignition.  
Explosive properties  
Keep people away from and upwind of spill/leak.  
Contaminated surfaces will be extremely slippery.

#### 6.2 Environmental precautions

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.  
If the product contaminates rivers and lakes or drains inform respective authorities.  
Pay attention to local or official regulations.

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

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Pick up and transfer to properly labelled containers.  
Dispose of in accordance with local regulations.  
Clean contaminated surface thoroughly.

#### 6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8.

---

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.  
Provide exhaust ventilation close to floor level.  
Remove all sources of ignition.  
Avoid formation of aerosol.  
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.  
Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.  
Keep container closed when not in use.

Advice on protection against fire and explosion : When transferring from one container to another apply earthing measures and use conductive hose material.  
Take measures to prevent the build up of electrostatic charge.  
Processing may lead to evolution of flammable volatiles.

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

- Vapours are heavier than air and may spread along floors.  
Vapours may form explosive mixture with air.  
Keep away from heat and sources of ignition.
- Hygiene measures : Avoid contact with skin, eyes and clothing.  
Do not breathe vapours, aerosols.  
Take off all contaminated clothing immediately.  
Handle in accordance with good industrial hygiene and safety practice.
- Fire-fighting class : Fires involving liquids or liquid containing substances. Also includes substances which become liquid at elevated temperatures.

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

- Requirements for storage areas and containers : Keep containers tightly closed in a cool, well-ventilated place.  
Store in original container.  
Provide collection vat.
- Further information on storage conditions : Keep away from heat and direct sunlight.
- Advice on common storage : Do not store together with:  
Oxidizing agents  
Keep away from combustible materials.
- Storage class (TRGS 510) : 3, Flammable liquids

### 7.3 Specific end use(s)

- Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Engineering measures

Solids with occupational exposure limits in liquid preparations do not cause an exposure in the workplace, because they are not present in a respirable form. Exposure can occur in the form of aerosols or after drying of the liquid the solids remain, possibly in a finely dispersed form.  
Provide sufficient air exchange and/or exhaust in work rooms.

#### Personal protective equipment

Eye protection : Wear eye/face protection.

Hand protection

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

Material	: Nitrile rubber
Break through time	: > 480 min
Glove thickness	: >= 0,4 mm
Protective index	: Class 6 Fluorinated rubber > 480 min >= 0,4 mm Class 6
Remarks	: The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The obtained break through times according to EN 374 Part III are not measured under normal operating conditions. Therefore a maximum usage time of 50% of the break through time is recommended.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case the work place is not ventilated sufficiently and during spray processing, it is necessary to wear respiratory protective equipment. Recommended Filter type: Combination filter A/P

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: clear, slight, yellow
Odour	: characteristic
pH	: 2,8 - 3,8, Concentration: 100 g/l (20 °C)
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Flash point	: 59 °C
Evaporation rate	: No data available
Upper explosion limit	: 6,1 %(V) Solvent Product is not explosive. However, formation of explosive air/steam mixtures is possible.
Lower explosion limit	: 0,7 %(V) Solvent Product is not explosive. However, formation of explosive air/steam mixtures is possible.
Vapour pressure	: No data available

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

Vapour density	: Not applicable
Density	: 0,97 g/cm <sup>3</sup> (20 °C)
Water solubility	: miscible
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: not auto-flammable
Ignition temperature	: No data available
Viscosity, dynamic	: 85 - 105 mPa.s (20 °C) Brookfield LVT 50 rpm spindle 2 24 mPa.s (40 °C) Method: Brookfield spindle 2 50 rpm
Viscosity, kinematic	: > 20,5 mm <sup>2</sup> /s (40 °C) calculated
Oxidizing properties	: Not applicable

### 9.2 Other information

Conductivity	: Not determined
--------------	------------------

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No hazards to be specially mentioned.

### 10.2 Chemical stability

The product is chemically stable.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Vapours may form explosive mixture with air.

### 10.4 Conditions to avoid

Conditions to avoid : Not applicable

### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products : No decomposition if stored and applied as directed.



## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

###### Product:

- Acute oral toxicity : LD50 Rat: > 2.000 mg/kg  
Argument by analogy
- Acute inhalation toxicity : Based on available data, the classification criteria are not met.
- Acute dermal toxicity : Based on available data, the classification criteria are not met.

###### Components:

###### **Isotridecanol, ethoxylated:**

- Acute oral toxicity : LD50 Rat: > 2.000 mg/kg  
(classified according to CESIO recommendations)

###### **Orange, sweet, ext.:**

- Acute oral toxicity : LD50 Rat: > 2.000 mg/kg
- Acute dermal toxicity : LD50 Rabbit: > 2.000 mg/kg

###### **Isotridecanol, ethoxylated:**

- Acute oral toxicity : LD50 Rat: > 2.000 mg/kg  
(classified according to CESIO recommendations)

##### Skin corrosion/irritation

###### Product:

Causes skin irritation.

###### Components:

###### **Isotridecanol, ethoxylated:**

Species: Rabbit  
Result: Mild skin irritation  
Classification: No skin irritation  
Method: OECD Test Guideline 404  
value stated in literature

###### **Orange, sweet, ext.:**

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

Result: Irritating to skin.

**Isotridecanol, ethoxylated:**

Species: Rabbit

Result: No skin irritation

Method: OECD Test Guideline 404  
value stated in literature

### Serious eye damage/eye irritation

**Product:**

Causes serious eye damage.

**Components:**

**Isotridecanol, ethoxylated:**

Species: Rabbit

Result: Risk of serious damage to eyes.

Method: OECD Test Guideline 405  
(classified according to CESIO recommendations)

**Isotridecanol, ethoxylated:**

Species: Rabbit

Result: Risk of serious damage to eyes.

Method: OECD Test Guideline 405  
(classified according to CESIO recommendations)

### Respiratory or skin sensitisation

**Product:**

May cause an allergic skin reaction.

**Components:**

**Orange, sweet, ext.:**

Result: May cause sensitisation by skin contact.

### Germ cell mutagenicity

**Product:**

Germ cell mutagenicity- Assessment : Based on available data, the classification criteria are not met.

### Carcinogenicity

**Product:**

Carcinogenicity - Assessment : Based on available data, the classification criteria are not met.

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

### Reproductive toxicity

**Product:**

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.

### STOT - single exposure

**Product:**

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

### STOT - repeated exposure

**Product:**

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

### Aspiration toxicity

**Product:**

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

---

## SECTION 12: Ecological information

### 12.1 Toxicity

**Product:**

- Toxicity to fish : No data is available on the product itself.
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae : No data is available on the product itself.
- Toxicity to bacteria : EC50 (activated sludge): 458 mg/l  
Method: Retarded respiration test (OECD 209)

**Components:**

**Isotridecanol, ethoxylated:**

- Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 1 - 10 mg/l  
Exposure time: 96 h  
(classified according to CESIO recommendations)
- Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

aquatic invertebrates                      Exposure time: 48 h  
(classified according to CESIO recommendations)

Toxicity to algae                               : EC50 (algae): > 1 - 10 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
(classified according to CESIO recommendations)

Toxicity to fish (Chronic toxicity)       : NOEC: > 0,1 - < 1 mg/l  
Exposure time: 21 d  
Species: Fish

**Orange, sweet, ext.:**

Ecotoxicology Assessment  
Chronic aquatic toxicity

: Toxic to aquatic life with long lasting effects.

**Isotridecanol, ethoxylated:**

Toxicity to fish                                 : LC50 (Oncorhynchus mykiss (rainbow trout)): > 1 - 10 mg/l  
Exposure time: 96 h  
(classified according to CESIO recommendations)

Toxicity to daphnia and other aquatic invertebrates       : EC50 (Daphnia (water flea)): > 1 - 10 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
(classified according to CESIO recommendations)

Toxicity to algae                               : EC50 (Algae toxicity): > 1 - 10 mg/l  
Exposure time: 72 h  
Method: Algal inhibition test  
(classified according to CESIO recommendations)

Toxicity to bacteria                           : EC10 (activated sludge): > 10.000 mg/l  
Exposure time: 17 h  
Argument by analogy

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)       : NOEC: > 1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
value stated in literature

### 12.2 Persistence and degradability

**Product:**

Biodegradability                               : Test Type: DOC-CO2 measuring  
Biodegradation: 80 %  
Exposure time: 28 d  
Method: OECD 302 B with CO2 (mineralisation)

Test Type: DOC-CO2 measuring  
Biodegradation: 89 %

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

Exposure time: 28 d  
Method: OECD 302 B with CO<sub>2</sub> (elimination)  
The product is "inherently biodegradable" according to the criteria of the OECD.

Test Type: O<sub>2</sub> measuring  
Biodegradation: 71 %  
Exposure time: 28 d  
Method: OECD 301 F (mineralisation)  
The product is "readily biodegradable" according to the criteria of the OECD.  
The surfactant(s) contained in this mixture complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Biochemical Oxygen Demand (BOD) : 760 mg O<sub>2</sub>/g  
Incubation time: 5 d  
Method: DIN EN 1899-1 (H 55)

Chemical Oxygen Demand (COD) : 1873 mg O<sub>2</sub>/g  
Method: DIN 38409-H-41

### Components:

#### **Isotridecanol, ethoxylated:**

Biodegradability : Test Type: CO<sub>2</sub> measuring  
Result: Readily biodegradable  
Biodegradation: > 60 %  
Exposure time: 28 d  
Method: OECD 301 B (mineralisation)  
(classified according to CESIO recommendations)

#### **Isotridecanol, ethoxylated:**

Biodegradability : Test Type: CO<sub>2</sub> measuring  
Result: Readily biodegradable  
Biodegradation: > 60 %  
Exposure time: 28 d  
Method: OECD 301 B (mineralisation)

### 12.3 Bioaccumulative potential

#### Product:

Bioaccumulation : No data is available on the product itself.

### 12.4 Mobility in soil

#### Product:

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

Mobility : No data available

### 12.5 Results of PBT and vPvB assessment

**Product:**

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 Other adverse effects

**Product:**

Adsorbed organic bound halogens (AOX) : Because of the components, which do not contain any organic halogens, this product does not increase the AOX-values in the waste water.

Additional ecological information : According to our knowledge, the product does not contain heavy metals and other compounds of EC directive 2000/60 EC.

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Pay attention to local or official regulations.

Contaminated packaging : Pay attention to local or official regulations.

---

## SECTION 14: Transport information

### 14.1 UN number

IMDG : UN 2319  
IATA : UN 2319

### 14.2 Proper shipping name

IMDG : TERPENE HYDROCARBONS, N.O.S.  
IATA : TERPENE HYDROCARBONS, N.O.S.

### 14.3 Transport hazard class

IMDG : 3  
IATA : 3

### 14.4 Packing group

IMDG

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

Packaging group : III  
Labels : 3  
EmS Number : F-E, S-D  
Segregation group : -

### IATA

Packaging group : III  
Labels : 3  
Packing instruction (cargo aircraft) : 366  
Packing instruction (passenger aircraft) : 355  
Packing instruction (passenger aircraft) : Y344

### 14.5 Environmental hazards

#### IMDG

Marine pollutant : no

#### IATA

Environmentally hazardous : no

### 14.6 Special precautions for user

Remarks : see chapter 6 - 8

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks : Not applicable

---

## SECTION 15: Regulatory information

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

Components according to : 30 % and more: Non-ionic surfactants  
Detergents Regulation EC : less than 5 %: Polycarboxylates  
648/2004 : Other constituents: Perfumes  
Allergens:  
LIMONENE  
LINALOOL

### 15.2 Chemical safety assessment

not required

## FELOSAN FDO NEU

Version 3.0

Revision Date 09.02.2016

Print Date 29.11.2017

### SECTION 16: Other information

#### Full text of H-Statements

H226	: Flammable liquid and vapour.
H304	: May be fatal if swallowed and enters airways.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H411	: Toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.

#### Full text of other abbreviations

Aquatic Chronic	: Chronic aquatic toxicity
Asp. Tox.	: Aspiration hazard
Eye Dam.	: Serious eye damage
Flam. Liq.	: Flammable liquids
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation

#### Further information

Other information	: This data sheet contains changes from the previous version in section(s):
	2
	3
	11
	12
	16

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.