



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 01.10.2014

Version: 4

Revision: 01.10.2014

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** *FS FORMULA 3685***Article number:** *EU31204***1.2 Relevant identified uses of the substance or mixture and uses advised against** *No further relevant information available.***Sector of Use***SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites**SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)***Application of the substance / the mixture***Delimiting agent**Cleaning agent/ Cleaner***1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

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**Further information obtainable from:***Customer Service**NL: Tel: + 31 164 250 100 Fax: + 31 164 266 710**B: Tel: +32 2 347 0117 Fax: +32 2 347 1395**IT: Tel: +39 069 266 91 Fax: +39 06.927 470 61**UK: Tel: +44 151 422 1000 Fax: +44 151 422 1011***1.4 Emergency telephone number:***Customer Service**NL: Tel: + 31 164 250 100 Fax: + 31 164 266 710**B: Tel: +32 2 347 0117 Fax: +32 2 347 1395**IT: Tel: +39 069 266 91 Fax: +39 06.927 470 61**UK: Tel: +44 151 422 1000 Fax: +44 151 422 1011***SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008***Skin Corr. 1A H314 Causes severe skin burns and eye damage.***Classification according to Directive 67/548/EEC or Directive 1999/45/EC***C; Corrosive**R34: Causes burns.***Information concerning particular hazards for human and environment:***The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.***Classification system:***The classification is according to the latest editions of the EU-lists, and extended by company and literature data.*

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**





GHS05

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
phosphoric acid
- **Hazard statements**  
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**  
P260 Do not breathe vapours.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P264 Wash thoroughly after handling.  
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.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P363 Wash contaminated clothing before reuse.  
P310 Immediately call a POISON CENTER/doctor.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards** The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 7664-38-2 EINECS: 231-633-2 Reg.nr.: 01-2119485924-24-xxxx	phosphoric acid  C R34 Met. Corr. 1, H290; Skin Corr. 1B, H314	25-50%
CAS: 7664-93-9 EINECS: 231-639-5 Reg.nr.: 01-2119458838-20	sulphuric acid  C R35 Skin Corr. 1A, H314	2.5-5%

- **Ingredients according to Detergents Regulation 648/2004/EC**  
For the wording of the listed risk phrases refer to section 16.

Nonionic surfactants	< 5%
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## SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
Seek medical treatment.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Do not induce vomiting; call for medical help immediately.  
Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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· 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

### SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents: CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- Protective equipment: No special measures required.

### SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures  
Wear protective equipment. Keep unprotected persons away.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- 6.4 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.

### SECTION 7: Handling and storage

- 7.1 Precautions for safe handling Use only in well ventilated areas.
- Information about fire - and explosion protection: No special measures required.
- 7.2 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: Do not store together with alkalis (caustic solutions).
- Further information about storage conditions: Keep receptacle tightly sealed.
- 7.3 Specific end use(s) No further relevant information available.

### SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

#### · 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

#### 7664-38-2 phosphoric acid (25-50%)

WEL (Great Britain)	Short-term value: 2 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup>
IOELV (European Union)	Short-term value: 2 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup>

#### · DNELs

#### 7664-38-2 phosphoric acid

Inhalative	DNEL Long term local mg/m <sup>3</sup>	0.73 mg/m <sup>3</sup> (consumer) 2.92 mg/m <sup>3</sup> (worker)
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#### 7664-93-9 sulphuric acid

Inhalative	DNEL Acute-local mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup> (worker)
	DNEL Long term local mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup> (worker)

#### · PNECs

#### 7664-93-9 sulphuric acid

PNEC Freshwater mg/L	0.0025 mg/L (-)
PNEC Freshwater sediment	0.002 mg/Kg (-)

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PNEC Marine water sediment	0.002 mg/Kg (-)
PNEC Marinewater mg/L	0.00025 mg/L (-)
PNEC Sewage treatment Plant mg/L	8.8 mg/L (-)

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Respiratory protection:** Not required.

· **Protection of hands:**



Protective gloves

Rubber gloves

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. 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.

Rubber gloves

· **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.

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

· **Not suitable are gloves made of the following materials:** Strong material gloves

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Acid resistant protective clothing

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Fluid
· <b>Colour:</b>	According to product specification
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· **pH-value at 20 °C:** < 1

· **Change in condition**

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	> 103 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

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· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapour pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1.279 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic at 20 °C:</b>	20 s (DIN 53211/4)
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
· <b>9.2 Other information</b>	No further relevant information available.

## SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with alkali (lyes).
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

### 7664-38-2 phosphoric acid

Oral	LD50	2600 mg/kg (Rat)
Dermal	LD50	2740 mg/kg (Rabbit)
	LC50 / 96 h	138 mg/ltr (blu) 98-106 mg/ltr (fish)
	LC50/ 24 h	245 mg/ltr (Brachydanio rerio)

### 7664-93-9 sulphuric acid

Oral	LD50	2140 mg/kg (Rat)
	EC50 / 24 h	29 mg/ltr (Daphnia magna (water flea))
	LC50 / 96 h	>500 mg/ltr (blu) >500 mg/ltr (Brachydanio rerio)

- **Primary irritant effect:**
- **on the skin:**  
Strong caustic effect on skin and mucous membranes.  
Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Corrosive

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Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:** The product is biodegradable.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**

· **General notes:**

The surfactant(s) contained in this preparation 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.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

In accordance with the requirements of the RVO in the Act on Detergents and Cleansing Agents, tensides are biodegradable up to at least 90 %.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

15 00 00	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01 00	packaging (including separately collected municipal packaging waste)
15 01 02	plastic packaging

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN3264
- **14.2 UN proper shipping name**
- **ADR** 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, SOLUTION, SULPHURIC ACID)
- **IMDG, IATA** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, SOLUTION, SULPHURIC ACID)

· **14.3 Transport hazard class(es)**· **ADR**· **Class**

8 (C1) Corrosive substances.

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· <b>Label</b>	8
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	8 Corrosive substances.
· <b>Label</b>	8
· <b>14.4 Packing group</b>	III
· <b>ADR, IMDG, IATA</b>	III
· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Warning: Corrosive substances.
· <b>Danger code (Kemler):</b>	80
· <b>EMS Number:</b>	F-A,S-B
· <b>Segregation groups</b>	Acids
· <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, SOLUTION, SULPHURIC ACID), 8, III

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 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.

- **Relevant phrases**  
H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
R34 Causes burns.  
R35 Causes severe burns.
- **Department issuing MSDS:**  
Customer Service  
NL: Tel: +31 164 250 100 Fax: +31 164 266 710  
B: Tel: +32 2 347 0117 Fax: +32 2 347 1395  
IT: Tel: +39 069 266 91 Fax: +39 06.927 470 61  
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**Contact:***Customer Service**NL: Tel: + 31 164 250 100 Fax: + 31 164 266 710**B: Tel: +32 2 347 0117 Fax: +32 2 347 1395**IT: Tel: +39 069 266 91 Fax: +39 06.927 470 61**UK: Tel: +44 151 422 1000 Fax: +44 151 422 1011***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 (division of the American Chemical Society)**DNEL: Derived No-Effect Level (REACH)**PNEC: Predicted No-Effect Concentration (REACH)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**Met. Corr. 1: Corrosive to metals, Hazard Category 1**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B***\* Data compared to the previous version altered.**

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