

according to Regulation (EC) No 1907/2006 (REACH) as amended

# Astasol AN8023FN

Creation date 27th July 2021

Revision date Version 1.0

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

1.1. Product identifier Astasol AN8023FN

Substance / mixture mixture Number AN8023FN

UFI K309-6U85-9NAE-C8AH

# 1.2. Relevant identified uses of the substance or mixture and uses advised against Mixture's intended use

For professional use only. Laboratory chemical substances.

The use descriptors

SU 24 Scientific research and development

PC 21 Laboratory chemicals

#### Mixture uses advised against

The product should not be used in ways other then those referred in Section 1.

### Main intended use

PC-TEC-19 Reagents and laboratory chemicals

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

#### Manufacturer

Name or trade name Analytika, spol. s r.o.

Address Ke Klíčovu 816/2a, Praha 9 - Vysočany, 190 00

Czech Republic

Identification number (CRN) 14891883 VAT Reg No CZ14891883

Phone +420 286 589 616
E-mail msds@analytika.net
Web address www.analytika.net

#### Competent person responsible for the safety data sheet

Name Analytika, spol. s r.o. E-mail msds@analytika.net

#### 1.4. Emergency telephone number

European emergency number: 112

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

### Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Met. Corr. 1, H290 Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1, H314

Full text of all classifications and hazard statements is given in the section 16.



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### Most serious adverse physico-chemical effects

May be corrosive to metals.

#### Most serious adverse effects on human health and the environment

Causes severe skin burns and eye damage. Harmful if swallowed. Toxic in contact with skin.

#### 2.2. Label elements

# **Hazard pictogram**



### Signal word

Danger

#### **Hazardous substances**

nitric acid

hydrofluoric acid ... %

# **Hazard statements**

H290 May be corrosive to metals.H302 Harmful if swallowed.H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

#### **Precautionary statements**

P260 Do not breathe vapours/spray.

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

protection.

P301+P330+ IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P331

P303+P361+ IF ON SKIN (or hair): Take off immediately all contaminated clothing.

P353 Rinse skin with water or shower.

P305+P351+ IF IN EYES: Rinse cautiously with water for several minutes. Remove

P338 contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a doctor.

#### **Supplemental information**

### 2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.



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# **SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

#### **Chemical characterization**

Mixture of substances and additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 007-004-00 -1 CAS: 7697-37-2 EC: 231-714-2 Registration number: 01-2119487297- 23-0070	nitric acid	5	Ox. Liq. 2, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Acute Tox. 3, H331 EUH071 Specific concentration limit: Skin Corr. 1A, H314: C ≥ 20 % Skin Corr. 1B, H314: 1 % ≤ C < 20 % Ox. Liq. 2, H272: C ≥ 99 % Ox. Liq. 3, H272: 65 % ≤ C < 99 % Met. Corr. 1, H290: C ≥ 1 % ATE Inhalačně (páry) = 2,65 mg/l	1, 2
-1 CAS: 7664-39-3 EC: 231-634-8	hydrofluoric acid %	1	Met. Corr. 1, H290 Acute Tox. 2, H300+H330 Acute Tox. 1, H310 Skin Corr. 1A, H314 Eye Dam. 1, H318 Specific concentration limit: Skin Corr. 1A, H314: C ≥ 7 % Eye Irrit. 2, H319: 0,1 % ≤ C < 1 % Skin Corr. 1B, H314: 1 % ≤ C < 7 %	1, 2
CAS: 13709-52-9 EC: 237-258-0	Hafnium (IV) fluoride	0,014	Skin Irrit. 2, H315 Eye Dam. 1, H318 Acute Tox. 3, H331 STOT SE 3, H335 EUH029	



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#### **Notes**

- 1 Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.
- 2 Substance with a Union workplace exposure limit.

Full text of all classifications and hazard statements is given in the section 16.

#### **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

#### If inhaled

Take care of your own safety, do not let the affected person walk! Terminate the exposure immediately; move the affected person to fresh air. Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

#### If on skin

Remove contaminated clothes. Take off any rings, watches, bracelets before or during washing if worn in the contaminated areas of the skin. Depending on the situation, call the medical rescue service and always ensure medical treatment. Rinse contaminated areas with a flow of water, lukewarm at best, for 10-30 minutes; do not use any brush, soap or neutralizers. Rinse skin with water or shower. Rinse cautiously with water for several minutes.

#### If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.



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#### If swallowed

DO NOT INDUCE VOMITING - there is danger of further damage to the gastrointestinal tract!!! Danger of esophageal and gastric perforation! RINSE THE MOUTH WITH WATER IMMEDIATELY AND LET THE PERSON DRINK 2-5 dl of cold water to reduce the heating effect of the corrosive substance. Consuming larger amounts of liquid is not advisable as it may induce vomiting and potential inhaling of the corrosive substances in the lungs. The affected person must not be forced to drink, particularly if already feeling pain in the mouth or throat. In this case let the affected person only rinse the mouth with water. DO NOT PROVIDE ACTIVATED CARBON! Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible.

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

#### If inhaled

Inhaling vapours can cause corrosion of the breathing system.

#### If on skin

Causes severe skin burns.

#### If in eyes

Causes serious eye damage.

#### If swallowed

Corrosion of the digestion system can occur.

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

Symptomatic treatment.

### More information

Other relevant information is not available.

#### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

#### Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

#### Unsuitable extinguishing media

Water - full jet.

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

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

### 5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

#### **SECTION 6: Accidental release measures**

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

The mixture is non-flammable. May be corrosive to metals. Provide sufficient ventilation. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale aerosols. Prevent contact with skin and eyes.

#### 6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.



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

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents. Absorb spillage to prevent material damage.

#### 6.4. Reference to other sections

See the Section 7, 8 and 13.

### **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Prevent formation of gases and vapours in concentrations exceeding the occupational exposure limits. Do not inhale aerosols. Prevent contact with skin and eyes. Do not eat, drink or smoke when using this product. Wash hands and exposed parts of the body thoroughly after handling. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

# 7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight. Store locked up. Keep only in original packaging.

Content	Packaging type	Material of package
30 ml	bottle	HDPE
50 ml	bottle	HDPE
100 ml	bottle	HDPE
250 ml	bottle	HDPE
500 ml	bottle	HDPE

Storage class

8B - Non-combustible corrosive substances

### 7.3. Specific end use(s)

not available

### **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

# **European Union**

#### **Commission Directive 2000/39/EC**

Substance name (component)	Туре	Value
	OEL 8 hours	1,5 mg/m <sup>3</sup>
hydroflypric acid 0/ (CAS) 7664 30 3)		1,8 ppm
hydrofluoric acid % (CAS: 7664-39-3)		2,5 mg/m <sup>3</sup>
	OEL 15 minutes	3 ppm

#### **European Union**

#### **Commission Directive 2006/15/EC**

Substance name (component)	Туре	Value
nitric acid (CAS: 7697-37-2)	OEL 15 minutes	2,6 mg/m <sup>3</sup>



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#### **European Union**

### Commission Directive 2006/15/EC

Substance name (component)	Туре	Value
nitric acid (CAS: 7697-37-2)	OEL 15 minutes	1 ppm

### 8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

#### **Eye/face protection**

Protective goggles or face shield (based on the nature of the work performed).

#### Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

#### **Respiratory protection**

Use a mask with filter when the exposition limits of the substances are exceeded or at the place with insufficient ventilation.

#### Thermal hazard

Not available.

# **Environmental exposure controls**

Observe usual measures for protection of the environment, see Section 6.2.

#### **SECTION 9: Physical and chemical properties**

Density and/or relative density

### 9.1. Information on basic physical and chemical properties

Physical state liauid Colour colourless Odour data not available Melting point/freezing point data not available Boiling point or initial boiling point and boiling data not available range Flammability data not available Lower and upper explosion limit data not available Flash point data not available Auto-ignition temperature data not available Decomposition temperature data not available pН 1 (undiluted) Kinematic viscosity data not available soluble Solubility in water Partition coefficient n-octanol/water (log data not available value) Vapour pressure data not available

data not available



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Form

data not available

#### 9.2. Other information

none

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

The mixture is non-flammable.

#### 10.2. Chemical stability

The product is stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

The product is stable under normal conditions.

#### 10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

#### 10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents. Thereby a dangerous exothermic reaction will be prevented. May be corrosive to metals.

#### 10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide, heavy smoke, hydrogen fluoride and nitrogen oxides are formed at high temperature and in fire.

### **SECTION 11: Toxicological information**

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

No toxicological data is available for the mixture.

# **Acute toxicity**

Harmful if swallowed. Toxic in contact with skin.

#### nitric acid

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Inhalation	LC50	260 mg/m <sup>3</sup>	30 min	Rat	
Inhalation (vapor)	ATE	2,65 mg/l			

#### Skin corrosion/irritation

Causes severe skin burns and eye damage.

#### Serious eye damage/irritation

Causes severe skin burns and eye damage.

#### Respiratory or skin sensitisation

Based on available data the classification criteria are not met.



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### Germ cell mutagenicity

Based on available data the classification criteria are not met.

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# Carcinogenicity

Based on available data the classification criteria are not met.

#### Reproductive toxicity

Based on available data the classification criteria are not met.

#### nitric acid

Effect	Parameter	Value	Time of exposure	Specific target organ	Result	Species	Sex
Developme ntal toxicity	TDLo	21150 mg/kg	21 day	Fetus	Fetotoxicity	Rat	

# Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

### Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

#### **Aspiration hazard**

Based on available data the classification criteria are not met.

#### 11.2. Information on other hazards

not available

# **SECTION 12: Ecological information**

#### 12.1. Toxicity

#### **Acute toxicity**

Data for the mixture are not available.

### nitric acid

Parameter	Value	Time of exposure	Species	Environme nt	Source
LD50	100-10 mg/l	96 hour			medisalar m
LC 100	25-36 mg/l		Fishes		medisalar m
TLm	72 mg/l	96 hour	Fishes (Gambusia affinis)	Freshwater	
LC 100	36 mg/l		Fishes (Lepomis macrochirus)		



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#### nitric acid

Parameter	Value	Time of exposure	Species	Environme nt	Source
LC50	33-100 mg/l	48 hour	Aquatic invertebrates (Ophryotrocha diadema)	Salt water	

### 12.2. Persistence and degradability

Data not available.

### 12.3. Bioaccumulative potential

Data not available.

## 12.4. Mobility in soil

Data not available.

#### 12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

#### 12.6. Endocrine disrupting properties

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

#### 12.7. Other adverse effects

Data not available.

### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

#### **Waste management legislation**

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

#### Waste type code

20 01 14 Acids \*

# Packaging waste type code

15 01 10 packaging containing residues of or contaminated by hazardous substances \* (\*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

### **SECTION 14: Transport information**

# 14.1. UN number or ID number

UN 2922



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# 14.2. UN proper shipping name

CORROSIVE LIQUID, TOXIC, N.O.S.

# 14.3. Transport hazard class(es)

8 Corrosive substances

#### 14.4. Packing group

II - substances presenting medium danger

#### 14.5. Environmental hazards

not relevant

### 14.6. Special precautions for user

Reference in the Sections 4 to 8.

# 14.7. Maritime transport in bulk according to IMO instruments

not relevant

#### **Additional information**

Hazard identification No. 86
UN number 2922
Classification code CT1
Safety signs 6.1+8



### Air transport - ICAO/IATA

Packaging instructions passenger 851 Cargo packaging instructions 855

#### **Marine transport - IMDG**

EmS (emergency plan) F-A, S-B MFAG 760



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### **SECTION 15: Regulatory information**

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/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, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended. The product contains explosives precursors subject to restrictions: The acquisition, import, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148, Article 5. All suspicious transactions and significant disappearances and thefts should be reported to the relevant national contact point. See https://ec.europa.eu/homeaffairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosivesprecursors/docs/list of competent authorities and national contact points en.pdf.

### 15.2. Chemical safety assessment

not available

H272

#### **SECTION 16: Other information**

May intensify fire; oxidiser.

Immediately call a doctor.

	, , ,
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H300+H330	Fatal if swallowed or if inhaled.
Guidelines for s	safe handling used in the safety data sheet
P260	Do not breathe vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+ P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+ P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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.

P310



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A list of additional standard phrases used in the safety data sheet

EUH071 Corrosive to the respiratory tract.
EUH029 Contact with water liberates toxic gas.

### Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

### Key to abbreviations and acronyms used in the safety data sheet

ADR European agreement concerning the international carriage of dangerous

goods by road

BCF Bioconcentration Factor
CAS Chemical Abstracts Service

CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging

of substance and mixtures

EC Identification code for each substance listed in EINECS

EINECS European Inventory of Existing Commercial Chemical Substances

EmS Emergency plan EU European Union

EuPCS European Product Categorisation System IATA International Air Transport Association

IBC International Code For The Construction And Equipment of Ships

Carrying Dangerous Chemicals

ICAO International Civil Aviation Organization IMDG International Maritime Dangerous Goods

INCI International Nomenclature of Cosmetic Ingredients
ISO International Organization for Standardization
IUPAC International Union of Pure and Applied Chemistry

LC50 Lethal concentration of a substance in which it can be expected death of

50% of the population

LD<sub>50</sub> Lethal dose of a substance in which it can be expected death of 50% of

the population

log Kow Octanol-water partition coefficient

MARPOL International Convention for the Prevention of Pollution from Ships

OEL Occupational Exposure Limits

PBT Persistent, Bioaccumulative and Toxic

ppm Parts per million

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals

RID Agreement on the transport of dangerous goods by rail

UN Four-figure identification number of the substance or article taken from

the UN Model Regulations

UVCB Substances of unknown or variable composition, complex reaction

products or biological materials

VOC Volatile organic compounds

vPvB Very Persistent and very Bioaccumulative

Acute Tox. Acute toxicity



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Eye Dam. Serious eye damage

Eye Irrit. Eye irritation

Met. Corr. Corrosive to metals Ox. Liq. Oxidising liquid Skin Corr. Skin corrosion Skin Irrit. Skin irritation

STOT SE Specific target organ toxicity - single exposure

#### **Training guidelines**

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

#### **Recommended restrictions of use**

not available

#### Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

#### Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.