

## Safety data sheet

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

#### 1.1. Product identifier.

Code: **VersumAF**  
 Product name: **Versum Ammonia Free 4.0 e 1.0**

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

Intended use: **Cream hair colour**

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

Name: **G&P COSMETICS SRL**  
 Full address: **Via Alcide De Gasperi,8**  
 District and Country: **52037 Sansepolcro (AR)**  
**ITALIA**

**Tel. 0575-720682**

**Fax. 0575-749923**

e-mail address of the competent person.

responsible for the Safety Data Sheet: **regulatory@ilovesensus.it**  
 Product distribution by: **G&P COSMETICS SRL**

#### 1.4. Emergency telephone number.

For urgent inquiries refer to: **02 66101029 Centro Antiveleni di Milano**

### SECTION 2. Hazards identification.

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

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Acute toxicity, category 4	H302	Harmful if swallowed.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, category 2	H371	May cause damage to organs.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

#### 2.2. Label elements.

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

## VersumAF - Versum Ammonia Free 4.0 e 1.0



Signal words:

Danger

Hazard statements:

**H302** Harmful if swallowed.  
**H318** Causes serious eye damage.  
**H315** Causes skin irritation.  
**H335** May cause respiratory irritation.  
**H317** May cause an allergic skin reaction.  
**H371** May cause damage to organs.  
**H411** Toxic to aquatic life with long lasting effects.  
**EUH031** Contact with acids liberates toxic gas.  
**EUH031** Contact with acids liberates toxic gas.  
**EUH208** Contains <name of sensitising substance>. May produce an allergic reaction.  
 Contains:  
 2,4-DIAMINOPHENOXYETHANOL HCL  
  
 May produce an allergic reaction.

Precautionary statements:

**P264** Wash . . . thoroughly after handling.  
**P272** Contaminated work clothing should not be allowed out of the workplace.  
**P273** Avoid release to the environment.  
**P280** Wear protective gloves / clothing and eye / face protection.  
**P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
**P403+P233** Store in a well-ventilated place. Keep container tightly closed.

**Contains:** ETHANOLAMINE  
 LAURETH-3  
 RESORCINOL  
 2-METHYLRESORCINOL  
 TOLUENE 2,5-DIAMINE SULFATE

**2.3. Other hazards.**

vPvB substances contained:

D-LIMONENE

PBT substances contained:

D-LIMONENE

**SECTION 3. Composition/information on ingredients.****3.1. Substances.**

Information not relevant.

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**3.2. Mixtures.**

Contains:

The full wording of hazard (H) phrases is given in section 16 of the sheet.

**Identification.****Classification 1272/2008 (CLP).****ETHANOLAMINE**

CAS. 141-43-5

 $8 \leq x < 9$ 

Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1B H314, STOT SE 3 H335, Aquatic Chronic 3 H412

EC. 205-483-3

INDEX. 603-030-00-8

Reg. no. 01-2119486455-28-0001

**LAURETH-3**

CAS. 68439-50-9

 $5 \leq x < 6$ 

Eye Dam. 1 H318, Aquatic Acute 1 H400 M=1, Aquatic Chronic 3 H412

EC. -

INDEX. -

**TOLUENE 2,5-DIAMINE SULFATE**

CAS. 615-50-9

 $0,001 \leq x < 6$ 

Acute Tox. 3 H301, Acute Tox. 4 H312, Acute Tox. 4 H332, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1

EC. 210-431-8

INDEX. 612-030-00-7

**Cocamidopropyl Betaine**

CAS. 61789-40-0

 $2,5 \leq x < 3$ 

Eye Dam. 1 H318

EC. -

INDEX. -

**OLETH-4 PHOSPHATE**

CAS. 39464-69-2

 $2 \leq x < 2,5$ 

Eye Dam. 1 H318, Skin Irrit. 2 H315

EC. -

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**OCTYLDODECANOL**

CAS. 5333-42-6

 $2 \leq x < 2,5$ 

Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335

EC. 226-242-9

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**RESORCINOL**

CAS. 108-46-3

 $0,001 \leq x < 1,5$ 

STOT SE 1 H370, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1

EC. 203-585-2

INDEX. 604-010-00-1

Reg. no. 01-2119480136-40-

**2-METHYLRESORCINOL**

CAS. 608-25-3

$0,001 \leq x < 1,5$

Acute Tox. 3 H301, Eye Irrit.  
2 H319, Skin Sens. 1 H317,  
Aquatic Chronic 3 H412

EC. 210-155-8

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**PENTASODIUM PENTETATE**

CAS. 000140-01-2

$0,8 \leq x < 0,9$

Repr. 2 H361, Acute Tox. 4  
H332

EC. -

INDEX. -

**2,4-DIAMINOPHENOXYETHANOL HCL**

CAS. 66422-95-5

$0,001 \leq x < 0,7$

Acute Tox. 4 H302, Eye Irrit.  
2 H319, STOT SE 3 H335,  
Skin Sens. 1 H317

EC. 266-357-1

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## SECTION 4. First aid measures.

### 4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

## SECTION 5. Firefighting measures.

### 5.1. Extinguishing media.

#### SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide and chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

#### UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water.

Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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

#### **HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

If large quantities of the product are involved in a fire, they can make it considerably worse. Do not breathe combustion products.

### **5.3. Advice for firefighters.**

#### **GENERAL INFORMATION**

In the case of fire, use jets of water to cool the containers to prevent the risk of explosions (product decomposition and excess pressure) and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Remove all containers containing the product from the fire, if it is safe to do so.

#### **SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## **SECTION 6. Accidental release measures.**

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

If there are no contraindications, spray powder with water to prevent the formation of dust.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

### **6.2. Environmental precautions.**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product and place it in containers for recovery or disposal. If the product is flammable, use explosion-proof equipment. If there are no contraindications, use jets of water to eliminate product residues.

Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### **6.4. Reference to other sections.**

Any information on personal protection and disposal is given in sections 8 and 13.

## **SECTION 7. Handling and storage.**

### **7.1. Precautions for safe handling.**

Ensure that there is an adequate earthing system for the equipment and personnel. In order to avoid the risk of fires and explosions, never use compressed air when handling. Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Avoid leakage of the product

into the environment. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Keep the product in clearly labelled containers. Keep containers well sealed. Store in a ventilated and dry place, far away from sources of ignition. Avoid violent blows. Avoid overheating. Avoid contact with water.

### 7.3. Specific end use(s).

Information not available.

## SECTION 8. Exposure controls/personal protection.

### 8.1. Control parameters.

Regulatory References:

TLV-ACGIH

ACGIH 2016

#### ETHANOLAMINE

##### Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH		2,5	1	7,6	3

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,085	mg/l
Normal value in marine water	0,0085	mg/l
Normal value for fresh water sediment	0,425	mg/kg
Normal value for marine water sediment	0,0425	mg/kg
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,035	mg/kg

##### Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.			Effects on workers			
	Acute local	Acute systemic	Chronic local	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND		3.75 mg/kg		
Inhalation.			2 mg/m3		2 mg/m3	3.3 mg/m3	VND
Skin.			VND		0.24 mg/kg	VND	1 mg/kg

#### TOLUENE 2,5-DIAMINE SULFATE

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,0126	mg/L
Normal value in marine water	0,00126	mg/L
Normal value for fresh water sediment	0,0112	mg/Kg
Normal value for marine water sediment	0,00112	mg/Kg

##### Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.			Effects on workers			
	Acute local	Acute systemic	Chronic local	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation.			VND		0,49 mg/m3		
Skin.			VND		0,10 mg/Kg/d		

#### PENTASODIUM PENTETATE

## Predicted no-effect concentration - PNEC.

Normal value in fresh water	64	mg/l
Normal value in marine water	64	mg/l
Normal value for fresh water sediment	23	mg/kg
Normal value for marine water sediment	64	mg/l
Normal value for water, intermittent release	31	mg/l
Normal value for the terrestrial compartment	853	mg/kg

## Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

**8.2. Exposure controls.**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

If the product may or must come into contact or react with acids, suitable technical and/or organisational measures should be taken to prevent the development of toxic and/or inflammable gases.

**HAND PROTECTION**

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).

Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

**SKIN PROTECTION**

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

**RESPIRATORY PROTECTION**

None required, unless indicated otherwise in the chemical risk assessment.

**ENVIRONMENTAL EXPOSURE CONTROLS.**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

**SECTION 9. Physical and chemical properties.****9.1. Information on basic physical and chemical properties.**

Appearance	Not available.
Colour	white to beige
Odour	characteristic
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.

Flash point.	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	Not available.
Solubility	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

#### 9.2. Other information.

Information not available.

## SECTION 10. Stability and reactivity.

### 10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.

### 10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions.

No hazardous reactions are foreseeable in normal conditions of use and storage.

### 10.4. Conditions to avoid.

None in particular. However the usual precautions used for chemical products should be respected.

### 10.5. Incompatible materials.

Information not available.



**10.6. Hazardous decomposition products.**

Information not available.

**SECTION 11. Toxicological information.**

The product is not classified corrosive to the skin on the test base "in vitro" made in accordance with EPA method 1120 and the OECD Guideline 435

**11.1. Information on toxicological effects.****ACUTE TOXICITY.**

LC50 (Inhalation - vapours) of the mixture:> 20 mg/l  
LC50 (Inhalation - mists / powders) of the mixture:> 5 mg/l  
LD50 (Oral) of the mixture:1288 mg/kg  
LD50 (Dermal) of the mixture:>2000 mg/kg

TOLUENE 2,5-DIAMINE SULFATE  
LD50 (Oral).98 mg/kg Rat  
LD50 (Dermal).6300 mg/kg estrapolato  
LC50 (Inhalation).1,8 estrapolato

RESORCINOL  
LD50 (Oral).510 mg/kg rat  
LD50 (Dermal).2830 mg/kg rat

2-METHYLRESORCINOL  
LD50 (Oral).200 mg/kg Rat

2,4-DIAMINOPHENOXYETHANOL HCL  
LD50 (Oral).1113 mg/kg rat

LAURETH-3  
LD50 (Oral).> 5000 mg/kg Rat

PROPYLENE GLYCOL  
LD50 (Oral).> 20000 mg/kg rat  
LD50 (Dermal).> 2000 mg/kg rabbit

ETHANOLAMINE  
LD50 (Oral).1515 mg/kg rat  
LD50 (Dermal).2504 mg/kg rabbit  
LC50 (Inhalation).> 1,3 rat

**SKIN CORROSION / IRRITATION.**

Causes skin irritation.

**SERIOUS EYE DAMAGE / IRRITATION.**

Causes serious eye damage.

**RESPIRATORY OR SKIN SENSITISATION.**

Sensitising for the skin.

**GERM CELL MUTAGENICITY.**

Does not meet the classification criteria for this hazard class.

**CARCINOGENICITY.**

Does not meet the classification criteria for this hazard class.

**REPRODUCTIVE TOXICITY.**

Does not meet the classification criteria for this hazard class.

**STOT - SINGLE EXPOSURE.**

May cause damage to organs.  
STOT - REPEATED EXPOSURE.

Does not meet the classification criteria for this hazard class.  
ASPIRATION HAZARD.

Does not meet the classification criteria for this hazard class.

## SECTION 12. Ecological information.

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

### 12.1. Toxicity.

#### TOLUENE 2,5-DIAMINE SULFATE

LC50 - for Fish.	0,36 mg/l Brachydanio rerio
EC50 - for Crustacea.	0,5 mg/l Daphnia magna
EC50 - for Algae / Aquatic Plants.	0,3 mg/l/72h Desmodesmus subspicatus

#### RESORCINOL

LC50 - for Fish.	31,6 mg/l/96h Leuciscus idus melanotus
EC50 - for Crustacea.	< 1 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	1,1 mg/l/72h Chlorella pyrenoidosa

#### 2-METHYLRESORCINOL

LC50 - for Fish.	12 mg/l/96h
EC50 - for Crustacea.	110 mg/l/48h Daphnia magna

#### LAURETH-3

LC50 - for Fish.	> 1 mg/l/96h Brachydanio rerio
EC50 - for Crustacea.	> 1 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	> 1 mg/l/72h Scenedesmus subspicatus

#### PROPYLENE GLYCOL

EC50 - for Crustacea.	18340 mg/l/48h Ceriodaphnia Dubia
LC10 for Fish.	40613 mg/l/96h Oncorhynchus mykiss

#### ETHANOLAMINE

LC50 - for Fish.	170 mg/l/96h Carassius auratus
EC50 - for Crustacea.	65 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	2,5 mg/l/72h Selenastrum capricornutum
Chronic NOEC for Fish.	1,2 mg/l Oryzias latipes
Chronic NOEC for Crustacea.	0,85 mg/l Daphnia magna

### 12.2. Persistence and degradability.

#### TOLUENE 2,5-DIAMINE SULFATE

NOT rapidly biodegradable.

**RESORCINOL**

Rapidly biodegradable.

**LAURETH-3**

Rapidly biodegradable.

**PROPYLENE GLYCOL**

Biodegradability: Information not available.

**ETHANOLAMINE**

Rapidly biodegradable.

**12.3. Bioaccumulative potential.**

Information not available.

**12.4. Mobility in soil.**

Information not available.

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

vPvB substances contained:

PBT substances contained:

D-LIMONENE

D-LIMONENE

**12.6. Other adverse effects.**

Information not available.

**SECTION 13. Disposal considerations.****13.1. Waste treatment methods.**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information.****14.1. UN number.**

ADR / RID, IMDG, IATA: 3077

ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity  $\leq$  5Kg or 5L, is not submitted to ADR provisions.

IMDG: In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity  $\leq$  5Kg or 5L, is not submitted to IMDG Code provisions.

IATA: In accordance with SP A197, this product, when is packed in receptacles of a capacity  $\leq$  5Kg or 5L, is not submitted to IATA dangerous goods regulations.

**14.2. UN proper shipping name.**

ADR / RID: ENVIRONMENT ALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IMDG: ENVIRONMENT ALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IATA: ENVIRONMENT ALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

**14.3. Transport hazard class(es).**

ADR / RID: Class: 9 Label: 9



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IMDG: Class: 9 Label: 9



IATA: Class: 9 Label: 9

**14.4. Packing group.**ADR / RID, IMDG, III  
IATA:**14.5. Environmental hazards.**ADR / RID: Environmentally  
Hazardous.

IMDG: Marine Pollutant.

IATA: Environmentally  
Hazardous.**14.6. Special precautions for user.**

ADR / RID: HIN - Kemler: 90

Limited  
Quantities: 5  
kgTunnel  
restriction  
code: (E)IMDG: Special Provision: -  
EMS: F-A, S-FLimited  
Quantities: 5  
kg

IATA: Cargo:

Maximum  
quantity: 400  
KgPackaging  
instructions:  
956

Pass.:

Maximum  
quantity: 400  
KgPackaging  
instructions:  
956

Special Instructions:

A97, A158,  
A179, A197**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code.**

Information not relevant.

**SECTION 15. Regulatory information.****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.**

Seveso Category - Directive 2012/18/EC: E2

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

None.

Substances in Candidate List (Art. 59 REACH).

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

#### **15.2. Chemical safety assessment.**

A chemical safety assessment has been performed for the following contained substances.

TOLUENE 2,5-DIAMINE SULFATE

### **SECTION 16. Other information.**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Repr. 2</b>	Reproductive toxicity, category 2
<b>Acute Tox. 3</b>	Acute toxicity, category 3
<b>STOT SE 1</b>	Specific target organ toxicity - single exposure, category 1
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>Skin Corr. 1B</b>	Skin corrosion, category 1B
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>Skin Sens. 1</b>	Skin sensitization, category 1
<b>Skin Sens. 1A</b>	Skin sensitization, category 1A
<b>STOT SE 2</b>	Specific target organ toxicity - single exposure, category 2
<b>Aquatic Acute 1</b>	Hazardous to the aquatic environment, acute toxicity, category 1
<b>Aquatic Chronic 1</b>	Hazardous to the aquatic environment, chronic toxicity, category 1
<b>Aquatic Chronic 2</b>	Hazardous to the aquatic environment, chronic toxicity, category 2
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3

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<b>H361</b>	Suspected of damaging fertility or the unborn child.
<b>H301</b>	Toxic if swallowed.
<b>H370</b>	Causes damage to organs.
<b>H302</b>	Harmful if swallowed.
<b>H312</b>	Harmful in contact with skin.
<b>H332</b>	Harmful if inhaled.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H371</b>	May cause damage to organs.
<b>H400</b>	Very toxic to aquatic life.
<b>H410</b>	Very toxic to aquatic life with long lasting effects.
<b>H411</b>	Toxic to aquatic life with long lasting effects.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH031</b>	Contact with acids liberates toxic gas.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament

5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**Changes to previous review:**

The following sections were modified:

02 / 11.