FarmicolSpA	FARMICOL SPA	Revision nr. 8
		Dated 11/03/2021
	MUFFYXID	Printed on 11/03/2021
	morr rais	Page n. 1/14
		Replaced revision:7 (Dated: 06/12/2018)

# Safety Data Sheet According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

**MUFFYXID** Product name

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

Intended use Mold dirt cleaner.

1.3. Details of the supplier of the safety data sheet

**FARMICOL SPA** Name Full address Corso Europa 85/91 District and Country 20033 Solaro (Mi)

Italia

Tel. 0039 02 84505 Fax 0039 02 84505479

e-mail address of the competent person

responsible for the Safety Data Sheet regolatory@farmicol.com

1.4. Emergency telephone number

For urgent inquiries refer to +39 0284505 (From Monday to Friday H. 8.00-17.00)

#### **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 (EU) Regulation 2015/830. 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:

Skin corrosion, category 1A H314 Causes severe skin burns and eye damage.

Causes serious eye damage. Serious eye damage, category 1 H318 Hazardous to the aquatic environment, acute toxicity, H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects. Hazardous to the aquatic environment, chronic toxicity,

category 2

#### 2.2. Label elements

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



## **FARMICOL SPA**

**MUFFYXID** 

Revision nr. 8

Dated 11/03/2021 Printed on 11/03/2021

Page n. 2/14

Replaced revision:7 (Dated: 06/12/2018)

#### Hazard pictograms:





Signal words: Danger

#### Hazard statements:

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects. **EUH031** Contact with acids liberates toxic gas.

**EUH206** Warning! Do not use together with other products. May release dangerous gases (chlorine).

#### Precautionary statements:

P501 Dispose of contents / container to . . .

P102 Keep out of reach of children.

Do not breathe dust / fume / gas / mist / vapours / spray. P260

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

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

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

**Contains:** SODIUM HYDROXIDE

SODIUM HYPOCHLORITE

#### Ingredients according to Regulation (EC) No. 648/2004

30% and more chlorine-based bleaching agents

#### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

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

#### 3.2. Mixtures

#### Contains:

Identification Classification 1272/2008 (CLP) x = Conc. %

**SODIUM HYPOCHLORITE (16% -**

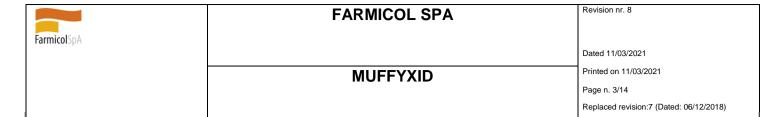
active chlorine)

CAS 7681-52-9  $37 \le x < 41$ Met. Corr. 1 H290, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335,

Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=1, EUH031,

Classification note/notes according to Annex VI to the CLP Regulation: B

EC 231-668-3



INDEX 017-011-00-1

Reg. no. 01-2119488154-34-XXXX

**SODIUM HYDROXIDE** 

CAS 1310-73-2 0,6 ≤ x < 0,7 Met. Corr. 1 H290, Skin Corr. 1A H314, Eye Dam. 1 H318

EC 215-185-5 INDEX 011-002-00-6 Reg. no. 01-2119457892-27

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

## **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.

#### 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

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE Do not breathe combustion products.

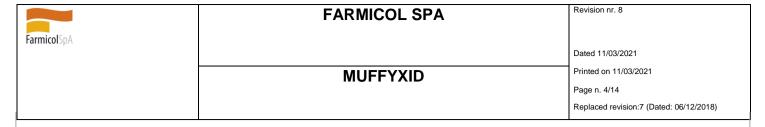
### 5.3. Advice for firefighters

#### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

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

Block the leakage if there is no hazard.

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 into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. 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. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

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

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany):

12

## 7.3. Specific end use(s)

Information not available

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

## 8.1. Control parameters

Regulatory References:

CZE Česká Republika

Nařízení vlády č. 246/2018 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů



DNK

ESP

FRA GRC

HRV

NOR

# **FARMICOL SPA**

Revision nr. 8

Dated 11/03/2021

Printed on 11/03/2021

Page n. 5/14

Replaced revision:7 (Dated: 06/12/2018)

## **MUFFYXID**

Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019 LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST) Danmark España

Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS ΕΦΗΜΕΡΙΔΑ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 152 - 21 Αυγούστου 2018 Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti

i biološkim graničnim vrijednostima (NN 91/18)

Fastsatt av Arbeids- og sosialdepartementet 21. august 2018 med hjemmel i lov 17. juni 2005 nr. 62 om

arbeidsmiljø, arbeidstid, stillingsvern mv. (arbeidsmiljøloven) § 1-3, § 1-4 og § 4-5 ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r POL Polska GBR

United Kingdom TLV-ACGIH EH40/2005 Workplace exposure limits (Third edition, published 2018) ACGIH 2020

France Ελλάδα

Hrvatska

Norge

CODICINITITI CONLOCATE					
Predicted no-effect concentration - PNEC					
Normal value in fresh water	0,00021	mg/l			
Normal value in marine water	0,000042	mg/l			
Normal value for water, intermittent release	0,00026	mg/l			
Normal value of STP microorganisms	0,03	mg/l			
Normal value for the atmosphere	11,1	mg/m3			

lealth - Derived no-effect level - DNEL / D	DMFL
---	------

	Effects on				Effects on			
	consumers				workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic	Acute local	Acute	Chronic local	Chronic
·				systemic		systemic		systemic
Inhalation	3,10 mg/m3	3,10 mg/m3	1,55 mg/m3	1,55 mg/m3	3,10 mg/m3	3,10 mg/m3	1,55 mg/m3	1,55 mg/m3

# **SODIUM HYDROXIDE**

Туре	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	1		2		
TLV	DNK			2 (C)		
VLA	ESP			2		
VLEP	FRA	2				
TLV	GRC	2		2		
GVI/KGVI	HRV			2		
TLV	NOR	2				
NDS/NDSCh	POL	0,5		1		
WEL	GBR			2		
TLV-ACGIH				2 (C)		

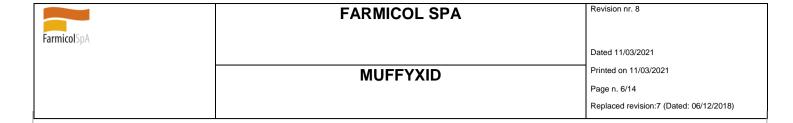
Health - Derived	no-effect	ievei - DNEL	/ DMEL

Ticaltii - Delived no-chect icvei - Divice								
	Effects on				Effects on			
	consumers				workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic	Acute local	Acute	Chronic local	Chronic
· ·				systemic		systemic		systemic
Inhalation	1 mg/m3		1 mg/m3		1 mg/m3		1 mg/m3	

# 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.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

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

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

#### SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

#### EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

# RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

#### ENVIRONMENTAL EXPOSURE CONTROLS

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

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

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

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

Appearance liquid

Colour straw-coloured
Odour characteristic
Odour threshold Not determined

pH 14 Method:ASTM E 70
Temperature:20°C

Melting point / freezing point

Not available
Initial boiling point

100 °C



# FARMICOL SPA

Revision nr. 8

Dated 11/03/2021

Printed on 11/03/2021

Page n. 7/14

Replaced revision:7 (Dated: 06/12/2018)

# **MUFFYXID**

Method: ASTM D 93

Boiling range Not available

Flash point > 100 °C
Evaporation Rate Not determined
Flammability of solids and gases not applicable
Lower inflammability limit Not available
Upper inflammability limit Not available
Lower explosive limit Not available
Upper explosive limit Not available

Vapour pressure

Vapour density

Relative density

Solubility

Not determined

1,12 Kg/dm³

soluble in water

Partition coefficient: n-octanol/water Not determined
Auto-ignition temperature Not available
Decomposition temperature Not determined
Viscosity Not determined
Explosive properties not explosive

Oxidising properties Not oxidizing

#### 9.2. Other information

Information not available

# **SECTION 10. Stability and reactivity**

#### 10.1. Reactivity

Information not available

#### 10.2. Chemical stability

Information not available

## 10.3. Possibility of hazardous reactions

Contact with strong acids causes the development of toxic gases.

#### 10.4. Conditions to avoid

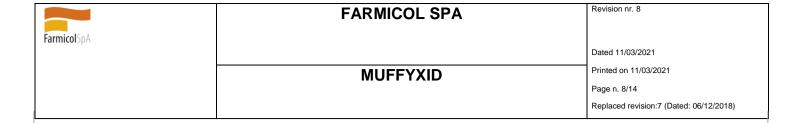
SODIUM HYDROXIDE

Avoid exposure to: air,moisture,sources of heat.

### 10.5. Incompatible materials

SODIUM HYDROXIDE

Incompatible with: strong acids,ammonia,zinc,lead,aluminium,water,flammable liquids.



#### 10.6. Hazardous decomposition products

Information not available

# **SECTION 11. Toxicological information**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

#### 11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

# ACUTE TOXICITY

ATE (Inhalation) of the mixture:
Not classified (no significant component)
ATE (Oral) of the mixture:
Not classified (no significant component)
ATE (Dermal) of the mixture:
Not classified (no significant component)

SODIUM HYDROXIDE

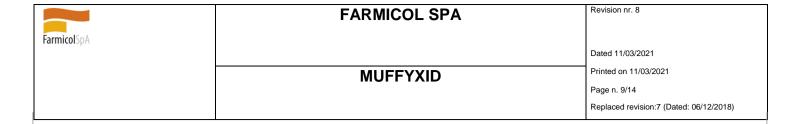
LD50 (Oral) 1350 mg/kg Rat

LD50 (Dermal) 1350 mg/kg Rat

SODIUM HYPOCHLORITE

LD50 (Oral) > 5000 mg/kg Rat

LD50 (Dermal) > 2000 mg/kg Rat



LC50 (Inhalation) > 10,5 mg/l/4h (Rat)

# SKIN CORROSION / IRRITATION

Corrosive for the skin Classification according to the experimental Ph value

#### SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

#### RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

#### 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

Does not meet the classification criteria for this hazard class

# 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**

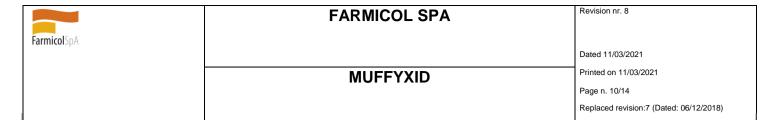
This product is dangerous for the environment and highly toxic for aquatic organisms.

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment. 12.1. Toxicity

SODIUM HYDROXIDE

LC50 - for Fish

45 mg/l/96h



EC50 - for Crustacea 40 mg/l/48h (Daphnia)

SODIUM HYPOCHLORITE

 LC50 - for Fish
 0,059 mg/l/96h

 EC50 - for Crustacea
 0,04 mg/l/48h

 EC50 - for Algae / Aquatic Plants
 0,0183 mg/l/72h

#### 12.2. Persistence and degradability

SODIUM HYDROXIDE

Solubility in water > 10000 mg/l

Degradability: information not available

SODIUM HYPOCHLORITE

Solubility in water 1000-10000 mg/l

12.3. Bioaccumulative potential

SODIUM HYPOCHLORITE

Partition coefficient: n-octanol/water -3,42

12.4. Mobility in soil

Information not available

## 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

# 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**



# **FARMICOL SPA**

**MUFFYXID** 

Revision nr. 8

Dated 11/03/2021

Printed on 11/03/2021

Page n. 11/14

Replaced revision:7 (Dated: 06/12/2018)

# 14.1. UN number

ADR / RID, IMDG,

1791

IATA:

## 14.2. UN proper shipping name

ADR / RID: HYPOCHLORITE SOLUTION IMDG: HYPOCHLORITE SOLUTION IATA: HYPOCHLORITE SOLUTION

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

ADR / RID:

Class: 8

Label: 8

IMDG:

Class: 8

Label: 8

IATA:

Class: 8

Label: 8



## 14.4. Packing group

ADR / RID, IMDG,

IATA:

IMDG:

IATA:

# 14.5. Environmental hazards

ADR / RID: Environmentally

Ш

Hazardous

IMDG: Marine Pollutant

IATA: NO



For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

# 14.6. Special precautions for user

ADR / RID: HIN - Kemler: 80

Limited Quantities: 1

restriction code: (E)

Tunnel

Special Provision: -

EMS: F-A, S-B

Limited Quantities: 1

L

Cargo:

Maximum quantity: 30 L

Packaging instructions:

855

Pass.:

Maximum quantity: 1 L

Packaging instructions:

851

FarmicolSpA	FARMICOL SPA	Revision nr. 8
·		Dated 11/03/2021
	MUFFYXID	Printed on 11/03/2021
		Page n. 12/14
		Replaced revision:7 (Dated: 06/12/2018)

Special Instructions:

A3, A803

#### 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: E1

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

Product

Point

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

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

3

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

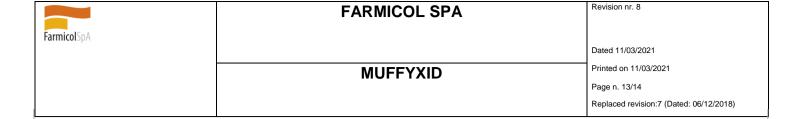
Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

Regulation (EC) No. 648/2004

Ingredients according to Regulation (EC) No. 648/2004

# 15.2. Chemical safety assessment

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



#### SODIUM HYPOCHLORITE

SODIUM HYDROXIDE

## **SECTION 16. Other information**

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

Met. Corr. 1 Substance or mixture corrosive to metals, category 1

Skin Corr. 1A Skin corrosion, category 1A
Skin Corr. 1B Skin corrosion, category 1B
Eye Dam. 1 Serious eye damage, category 1

STOT SE 3 Specific target organ toxicity - single exposure, category 3

Aquatic Acute 1 Hazardous to the aquatic environment, acute toxicity, category 1

Aquatic Chronic 1 Hazardous to the aquatic environment, chronic toxicity, category 1

Aquatic Chronic 2 Hazardous to the aquatic environment, chronic toxicity, category 2

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.
H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

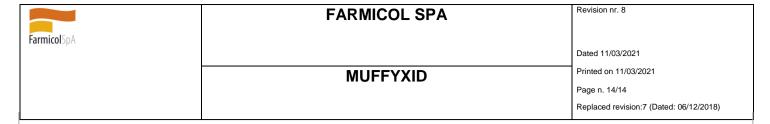
H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
 EUH031 Contact with acids liberates toxic gas.

EUH206 Warning! Do not use together with other products. May release dangerous gases

(chlorine).

### 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 (EC) 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
- 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
- 13. Regulation (EU) 2017/776 (X Atp. CLP)
- 14. Regulation (EU) 2018/669 (XI Atp. CLP)
- 15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
- 16. Regulation (EU) 2019/521 (XII Atp. CLP)
- 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
- IFA GESTIS website
- **FCHA** website
- Database of SDS models for chemicals Ministry of Health and ISS (Istituto Superiore di Sanità) Italy

#### 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.

## CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 07 / 08 / 09 / 10 / 11 / 12 / 15 / 16.