SAFETY DATA SHEET

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code:	NanoPhos_GA_240820-005
Product name	NANOMAX RESIDUE CLEANER
UFI:	A8RV-R0D5-300K-X440

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

Intended use	Detergent to remove residue from hard surfaces

1.3. Details of the supplier of the safety data sheet

Name	NANOPHOS SA
Full address	Technological & Cultural Park
District and Country	19 500 Lavrio (Greece) greece
	Phone +30 22920 69312
	Fax +30 22920 69303
Person's email address	
competent authority responsible for	
Safety Data Sheet Supplier:	iarabatz@NanoPhos.com Ioannis Arabatzis

1.4. Emergency telephone number

For urgent questions, please call	+30 210 7793777

SECTION 2. Hazard identification

2.1. Classification of the substance or mixture

The product is classified as hazardous according to the provisions set out in Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and supplements).
The product therefore requires a safety data sheet that complies with the provisions of Regulation (EU) 2020/878.
Any additional information on health and/or environmental risks is provided in sections 11 and 12 of this sheet.

Hazard classification and indications:

Skin corrosion, category 1A	H314	Causes severe skin burns and eye damage.
Serious eye injuries, category 1	H318	Causes serious eye damage.

2.2. Labeling elements

Hazard labeling according to Regulation (EC) 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words:	**danger**

Danger indications:

H314	**Causes severe skin burns and serious eye damage.**
EUH071	**Corrosive to the respiratory tract.**

Indications for Caution

P260	**Do not breathe smoke, mist or spray.**
P305+P351+P338	**In case of eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
P303+P361+P353	**If on skin (or hair): Remove immediately all contaminated clothing. Rinse skin with water [or shower].**
P280	**Wear protective gloves / protective clothing / eye protection / face protection.**
P310	**Call a poison control center or doctor immediately.**
P264	**Wash thoroughly with plenty of water and soap after handling.**
P321	**Specific treatment (see ... on this label)**
P304+P340	**If inhaled: Remove person to fresh air and keep comfortable for breathing.**
P501	**Dispose of contents or container in accordance with local/national/international regulations.**
P102	**Keep out of reach of children.**
P101	**If medical advice is needed, have the product container or label at hand.**
P301+P330+P331	**If swallowed: Rinse mouth. DO NOT induce vomiting.**
P405	**Keep in a closed place.**

Contain:	**Formic acid**

The product is not intended for uses as defined in Directive 2004/42/EC.

2.3. Other hazards

Based on available data, the product does not contain any PBT or vPvB in a percentage greater than 0.1%.

The product does not contain substances with endocrine disrupting properties in a concentration greater than 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contain:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
Formic acid		
INDEX 607-001-00-0	5 x < 10	Skin corrosion, category 1A H314, Serious eye damage, category 1 H318, EUH071, Classification note according to Annex VI of the CLP Regulation: B
EC 200-579-1		Skin corrosion, category 1A H314: 90% Skin corrosion, category 1B H314: 10% - < 90% Skin corrosion, category 1C H314: 10% - < 90% Skin irritation, category 2 H315: 2% - < 10% Serious eye damage, category 1 H318: > 0% - < 0% Eye irritation, category 2 H319: 2% - < 10%
CAS 64-18-6		
3-Methoxy-3-methylbutan-1-one		
INDEX -	5 x < 10	Eye irritation, category 2 H319: Causes eye irritation.
EC 260-252-4		
CAS 56539-66-3		
REACH Reg. 01-2119976333-33-0000		
Hydrogen chloride		
INDEX 017-002-01-X	1 x < 3	Corrosive to metals category 1 H290, Skin corrosion, category 1A H314, Serious eye damage, category 1 H318, Specific target organ toxicity (single exposure), category 3 H335, Classification note according to Annex VI of the CLP Regulation: B.
EC 231-595-7		Serious eye damage, category 1 H318: 99%
CAS 7647-01-0		

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

SECTION 4. First aid measures

4.1. Description of first aid measures

If in doubt or if symptoms are present, contact a doctor and show him/her this document.
In case of severe symptoms, seek emergency medical help.
EYES: Remove contact lenses, if present and easy to do. Rinse immediately with plenty of water for at least 15 minutes, holding the eyelids wide open.
Consult a doctor for medical advice/attention.
SKIN: Remove all contaminated clothing immediately. Rinse immediately and thoroughly with running water (and soap if possible). Seek medical advice/attention. Avoid further contact with contaminated clothing.

INGESTION: Do not induce vomiting unless specifically directed to do so by a physician. Rinse mouth with running water. Never give anything by mouth to an unconscious person.
Seek medical advice/attention.
INHALATION: Remove victim to fresh air, away from the scene of the accident. In case of respiratory symptoms (cough, wheezing, difficulty breathing, asthma), keep victim in a position comfortable for breathing. If necessary, administer oxygen. If not breathing, apply artificial respiration. Seek medical advice/attention.
Rescuer protection
It is recommended that rescuers who provide assistance to a person exposed to a chemical substance or mixture wear personal protective equipment. The nature of the protection depends on the the hazard level of the substance or mixture, the type of exposure and the extent of contamination. In the absence of other more specific indications, the use of disposable gloves is recommended in case of possible contact with body fluids. For the type of personal protective equipment appropriate to the characteristics of the substance or mixture, see section 8.

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

Specific information about symptoms and effects caused by the product is unknown.
DELAYED EFFECTS: Based on currently available information, there are no known cases of delayed effects following exposure to this product.
4.3. Indication of any immediate medical attention and special treatment needed: Call a
POISON CENTER or doctor/physician immediately.
Means that must be available at the workplace for specific and immediate treatment: Running water for washing skin and eyes.

SECTION 5. Firefighting measures:

5.1. Fire-extinguishing media Suitable
extinguishing equipment
Extinguishing equipment must be of conventional type: carbon dioxide, foam, powder and water spray.
Unsuitable extinguishing equipmentNone in particular.
5.2. Special hazards arising from the substance or mixture
Hazards caused by exposure in the event of a fire
Do not inhale combustion products.
5.3. Advice for firefighters
GENERAL INFORMATION
Use water jets to cool containers and prevent product decomposition and the development of substances potentially hazardous to health.
Always wear full fire prevention equipment. Collect firefighting water to prevent it from flowing into the sewage system.
Dispose of contaminated extinguishing water and fire debris according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Normal firefighting clothing, i.e. protective clothing (BS EN 469), gloves (BS EN 659) and boots (HO specifications A29 and A30), in combination with 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 leak if there is no immediate danger.
Wear appropriate protective equipment (including personal protective equipment as specified in Section 8 of the safety data sheet) to prevent contamination of skin, eyes and personal clothing. This applies to both processing personnel and those involved in emergency procedures.

6.2. Environmental precautions
The product must not enter the sewage system or come into contact with surface water or groundwater.
6.3. Methods and materials for containment and cleaning up
Collect spilled product in a suitable container. Assess the compatibility of the container to be used by checking section 10.
Absorb the remainder with inert absorbent material.

Ensure that the spill area is well ventilated. Contaminated materials should be disposed of in accordance with regulations set out in section 13.

6.4. Reference to other sections

Information on personal protection and waste disposal is provided in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Ensure that there is an adequate grounding system for equipment and personnel. Avoid contact with eyes and skin. Do not inhale dust, vapors or mist. Do not eat, drink or smoke during use. Wash hands after use. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated, dry place away from sources of ignition. Keep containers tightly closed. Store product in properly labeled containers. Avoid overheating. Avoid violent impacts. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end uses

Information unavailable.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

brothers	French	Valeurs limites d'exposition professionnelle aux agents chimiques en FranceDécret n° 2021-1849 du 28 December 2021
GRC	Greece	ÿ.ÿ. 26/2020 (ÿÿÿ 50/ÿ` 6.3.2020) Harmonization of Greek legislation to the provisions of the directives 2017/2398/Eÿ, 2019/130/ÿÿ and 2019/983/ÿÿ «for the amendment of Directive 2004/37/ÿÿ the protection of workers from the risks associated with exposure to carcinogens or ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ factors against work"»
red	Romania	Decision No. 53/2021 amending Government Decision No. 1,218/2006, as well as and for the modification and supplementing government decision no. 1,093/2006
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
I	EU OEL	Directives (EU) 2022/431; Directives (EU) 2019/1831; Directives (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directives (EU) 2017/164; Directives 2009/161/EU; Directives 2006/15/EC; DIRECTIVES 2004/37/EC; Directives 2000/39/EC; Directives 98/24/EC; Directives 91/322/EEC.
	TLV-ACGIH	ACGIH 2023

FORMIC ACID

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Comments / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	brothers	9	5			
TLV	GRC	9	5			
TLV	red	9	5			
WEL	GBR	9.6	5			
steel	I	9	5			
TLV-ACGIH		9.4	5	18.8	10	

Predicted no-effect concentration - PNEC

Normal value in fresh water	2	mg/l
Normal value in seawater	0.2	mg/l
Normal value for freshwater sediments	13.4	mg/kg
Normal value for marine sediments	1.34	mg/kg
Normal value of STP microorganisms	7.2	mg/l
Normal value for the terrestrial compartment	1.5	mg/kg

Health - Derived No Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exposure routes	Acute local	Acute systemic	Local chronic	Systemic chronic	Acute local	Acute Sistema	Local Chronicle	Chronicle systemic
Inhalation			3 mg/m3	3 mg/m3			9.5 mg/m3	9.5 mg/m3

3-Methoxy-3-methylbutan-1-ol

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exposure routes	Acute local	Acute systemic	Local chronic	Chronic systemic	Acute local	Acute Sistema	Local Chronicle	Chronicle systemic
Oral				2.5 mg/kg b/w				
Inhalation				4.4 mg/m3				18 mg/m3
Skin				3.1 mg/kg b/w				6.25 mg/kg b/w

Hydrogen Chloride

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Comments / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	brothers			7.6	5	
TLV	red	8	5	15	10	
WEL	GBR	2	1	8	5	
steel	I	8	5	15	10	
TLV-ACGIH				2.9 (C)	2 (C)	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0.036	mg/l
Normal value in seawater	0.036	mg/l
Normal value of microorganisms in STP	0.036	mg/l

Health - Derived No Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exposure routes	Acute local	Acute systemic	Local chronic	Systemic chronic	Acute local	Acute Sistema	Local Chronicle	Chronicle systemic
Inhalation					15 mg/m3		8 mg/m3	

Legend:

(C) = UPPER LIMIT; 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, ; LOW = low danger; MED = medium hazard; HIGH = high hazard. =

8.2. Exposure control

The use of appropriate technical equipment should always take priority over personal protective equipment, so make sure the workplace is well ventilated through effective local exhaust ventilation.
When choosing personal protective equipment, seek advice from the chemical supplier. Personal protective equipment should be CE marked, indicating that it complies with applicable standards.
Make sure there is an emergency shower with a face and eye wash station.
HAND PROTECTION
Protect your hands with category III work gloves. When choosing the material for work gloves (see standard EN 374), the following should be taken into account: compatibility, degradation and permeation time.
The resistance of gloves to chemical agents should be checked before use, as it can be unpredictable. The service life of the gloves depends on the duration and type of use.
SKIN PROTECTION
Wear professional category III long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344).
Wash your body with soap and water after removing protective equipment.
EYE PROTECTION
Wear a hooded visor or a protective visor combined with tight-fitting goggles (see standard EN ISO 16321).
RESPIRATORY PROTECTION
Respiratory protection devices must be used if the technical measures adopted are not sufficient to limit the worker's exposure to the established limit values. Use a mask with a type A filter and the class (1, 2 or 3) must be chosen according to the usable concentration limit (see standard EN 14387).
If the substance in question is odourless or its odour threshold is higher than the corresponding TLV-TWA, and in the event of an accident, wear open-circuit compressed air breathing apparatus (according to EN 137) or external air breathing apparatus (according to EN 138). For the correct choice of respiratory protective device, refer to EN 529.
ENVIRONMENTAL EXPOSURE CONTROL

Emissions generated by manufacturing processes, including those generated by ventilation equipment, must be verified to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

property	Liquid value	Information
Appearance		
Color	golden yellow	
Smell	strong	
Melting/freezing point	not available	
Initial boiling point	not available	
FLASH	not available	
Lower explosion limit	not available	
Upper explosion limit	not available	
Flash point	> 60 °C	
Autoignition temperature	not available	
Decomposition temperature	not available	

pH	**0.25**
Kinetic viscosity	**is not available**
Dynamic viscosity	**2 mPa.s**
Solubility	**is not available**
Partition coefficient: n-octanol/water	**is not available**
Vapor pressure	**is not available**
Density and/or relative density	**1.05±0.05 kg/L kg/l**
Relative vapor density	**is not available**
Particle characteristics	**is not available**

9.2. Other information

9.2.1. Information on physical hazard classes

Information is not available.

9.2.2. Other safety features

Information is not available.

SECTION 10. Stability and reactivity

10.1. Reactivity

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

Formic acid

It decomposes under the effect of heat. It attacks various types of plastics. At temperature

The room may release carbon monoxide.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Vapours may form explosive mixtures with air. Formic acid

Risk of explosion on contact with: sodium hypochlorite, nitromethane, hydrogen peroxide, alcohol

furfuryl.

May react dangerously with: alkali hydroxides, alkaline earth hydroxides, aluminium,

palladium-carbon, oxidizing agents, phosphorus pentoxide, nitric acid, concentrated sulfuric acid,

Thallium trinitrate trihydrate.

May react dangerously if exposed to: heat.

Forms explosive mixtures with: air.

Hydrogen chloride

Risk of explosion on contact with: alkali metals, aluminium powder, hydrogen cyanide, alcohol.
10.4. Conditions to avoid Avoid
overheating. Avoid accumulation of electrostatic charges. Avoid all sources of ignition. Formic acid Avoid exposure to: light, heat sources, open flames.
10.5. Incompatible materials Formic acid Incompatible
with: strong oxidants, strong bases, sulfuric acid, furfuryl acid.
Hydrogen chloride
Incompatible with: alkalis, organic substances, strong oxidants, metals.
10.6. Hazardous decomposition products In case of
thermal decomposition or fire, gases and vapours hazardous to health may be released. Formic acid May develop: carbon monoxide, hydrogen.
Hydrogen chloride On
decomposition develops: hydrochloric acid vapors.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are assessed according to the properties of the substances it contains, using the criteria specified in the applicable regulations for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, in order to assess the toxicological effects of exposure to the product.
11.1. Information on hazard classes according to Regulation (EC) No. 1272/2008 Metabolism, toxicokinetics,
mechanism of action and other information: Information not available Information on possible routes of
exposure: Information not available Immediate and delayed effects as well as
chronic effects from short and long-term exposure: Information not available

Interactive effects

Information unavailable

Acute toxicity

Corrosive to the respiratory tract.

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

Formic acid

LC50 (Inhalation vapor)	**> 7.85 mg/l/4h Rats**

3-Methoxy-3-methylbutan-1-ol

LD50 (Dermal):	**> 2000 mg/kg Rats**
LD50 (Oral):	**4400 mg/kg Rats**

Hydrogen Chloride

LD50 (Oral):	**900 mg/kg (Rabbit)**
LC50 (Inhalation vapours):	**7521 mg/l/4h (Rat)**

Corrosivity / Skin irritation

Corrosive to skin

Classification according to experimental pH value

Severe eye damage/Eye irritation

Causes serious eye damage

Respiratory or skin sensitization

Does not meet classification criteria

for this hazard class.

CELL MUTAGENICITY

germ

Does not meet classification criteria

for this hazard class.

carcinogen

Does not meet classification criteria

for this hazard class.

REPRODUCTIVE TOXICITY

Does not meet classification criteria

for this hazard class.

STOT - SINGLE EXPOSURE

Does not meet classification criteria

for this hazard class.

STOT - RECURRENT EXPOSURE

Does not meet classification criteria

for this hazard class.

Aspiration hazard
Does not meet the classification criteria for this hazard class.
11.2. Information on other hazards
Based on the available data, the product does not contain substances listed in the main European lists of substances potentially or suspected of being endocrine disruptors with effects on human health, which are under evaluation.

SECTION 12. Ecological information

Use this product in accordance with best practices. Avoid random disposal. Inform the competent authorities if the product enters water courses or contaminates soil or vegetation.

12.1. Toxicity

Hydrogen chloride	
LC50 - for Fish	**20.5 mg/l/96h, Lepomis macrochirus (Bluegill sunfish)**
EC50 – for Crustaceans	**1.3 mg/l/48h**
3-Methoxy-3-methylbutan-1-ol	
LC50 – for Fish	**> 100 mg/l/96h (Oryzias latipes (Japanese medaka))**
EC50 – for Crustaceans	**> 1000 mg/l/48h (Daphnia magna (Water flea))**

12.2. Persistence and degradability

Hydrogen chloride	
Solubility in water	**> 10000 mg/l**
Degradability: Information not available.	
Formic Acid	
Solubility in water	**1000 - 10000 mg/l**
Rapidly degradable	
3-Methoxy-3-methylbutan-1-ol	
Rapid degradability	

12.3. Bioaccumulative potential

Formic acid	
Partition coefficient: n-octanol/water	**-2.1**

12.4. Mobility in soil

Information unavailable
12.5. Results of PBT and vPvB assessment

Based on available data, the product does not contain PBT (Persistent, Bioaccumulative and Toxic) or vPvB (very Persistent and very Bioaccumulative) in percentages greater than 0.1%.

12.6. Endocrine disrupting properties
Information unavailable

Based on the available data, the product does not contain substances listed in the main European lists of substances that are potentially or suspected of being endocrine disruptors with effects on the environment, which are under evaluation.

12.7. Other adverse effects

Information unavailable

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Recycling is recommended, where possible. Product residues should be considered as special hazardous waste. The hazard level of waste containing this product should be assessed according to applicable regulations. Disposal should be carried out by an authorised waste management company, in accordance with national and local regulations. Transport of waste may be subject to ADR restrictions.

CONTAMINATED PACKAGING

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

SECTION 14. Informational transport

14.1. UN number or identification number

ADR / RID, IMDG, IATA:	UN 1760

14.2. UN proper shipping name

ADR/RID:	Corrosive liquid, NOS
IMDG:	Corrosive liquid, NOS
BEHOLD:	Corrosive liquid, NOS

14.3. Transport hazard class

ADR / RID: Class: 8		Labels: 8
IMDG:	Grade: 8	Labels: 8
BEHOLD:	Grade: 8	Labels: 8

14.4. Packing group

ADR / RID, IMDG, IATA:	III

14.5. Environmental hazards

ADR/RID:	NO
IMDG:	It is not a marine pollutant

BEHOLD:	NO		

14.6. Special precautions for the user

ADR/RID:	HIN - Kemler: 80	Limited quantities: 5	Restriction tunnel
		IT	code: (E)
	Special provision: 274		
IMDG:	EMS: FA, SB	amounts Limited: 5L	
BEHOLD:	Cargo:	Maximum quantity: 60 L	Instructions packaging: 856
	Passengers:	Maximum quantity: 5 L	Instructions packaging: 852
	Special provision:	A3, A803	

14.7. Bulk maritime transport according to IMO instruments

Irrelevant information.

SECTION 15. Regulatory Information

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

Seveso Category - Directive 2012/18/EU: None

Restrictions related to the product or the substances contained, according to Annex XVII to Regulation (EC) No. 1907/2006

Product

Point 3

Substance contained

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of precursors

explosives

Not applicable

Substances from the Candidate List (Art. 59 REACH)

Based on the available data, the product does not contain any SVHC (Substance of Very High Concern) in higher percentages.

greater than 0.1%.

Substances subject to authorisation (Annex XIV REACH)

Nothing

Substances subject to export reporting under Regulation (EU) 649/2012

Nothing

Substances subject to the Rotterdam Convention:
No substance
Substances subject to the Stockholm Convention:
No substance
Health checks

Workers exposed to this chemical agent do not need to undergo health checks, provided that the available risk assessment data demonstrate that the risks to the health and safety of workers are modest and that Directive 98/24/EC is complied with.

15.2. Chemical safety assessment
A chemical safety assessment has not been carried out for the preparation/substances indicated in section 3.

SECTION 16. Other information

Text of the hazard statements (H) mentioned in sections 2-3 of the sheet:

Corrosivity of Materials Class 1	Substance or mixture corrosive to metals, category 1
Skin corrosivity, Class 1A	Corrosive to skin, category 1A
Skin corrosion, Class 1B	Corrosive to skin, category 1B
Skin corrosivity, Class 1C	Corrosive to skin, category 1C
Skin corrosion, Class. 1	Corrosive to skin, category 1
Eye irritation, Class 1	Serious eye damage, category 1
Eye irritation, Class 2	Eye irritation, category 2
Skin irritant, category 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation
H335	May cause respiratory irritation.
EUH071	Corrosive to the respiratory tract.

LEGEND:
- ADR: European Agreement concerning the Carriage of Dangerous Goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Registration Number
- EC50: Effective concentration (necessary to induce a 50% effect)
- CE: Identifier in ESIS (European Archive of Existing Substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Plan
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulations
- IC50: Concentration for Immobilization 50%

- IMDG: International Maritime Dangerous Goods Code - IMO: International Maritime Organization - INDEX: Identifier in Annex VI of the CLP Regulation - LC50: Lethal Concentration 50% - LD50: Lethal Dose 50% - OEL: Occupational Exposure Level - PBT: Persistent, Bioaccumulative and Toxic - PEC: Predicted Environmental Concentration - PEL: Predicted Exposure Level - PMT: Persistent, Mobile and Toxic - PNEC: Predicted No Effect Concentration - REACH: Regulation (EC) 1907/2006 - RID: Regulation concerning the International Carriage of Dangerous Goods by Rail - TLV: Exposure Limit Value - TLV CEILING: Concentration not to be exceeded at any time during occupational exposure - TWA: Time Weighted Average Exposure Limit - TWA STEL: Short Term Exposure Limit - VOC: Volatile Organic Compounds - vPvB: Very Persistent and Very Bioaccumulative - vPvM: Very Persistent and very mobile - WGK: Water hazard classes (Germany).

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) 2020/878 (Annex II of the REACH Regulation) 4. Regulation (EC) 790/2009 (I Atp. CLP) 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) 2019/521 (XII Atp. CLP) 16. Delegated Regulation (EU) 2018/1480 (XIII Atp. CLP) 17. Regulation (EU) 2019/1148 18. Delegated Regulation (EU) 2020/217 (XIV Atp. CLP) 19. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP) 20. Delegated Regulation (EU) 2021/643 (XVI Atp. CLP) 21. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP) 22. Delegated Regulation (EU) 2022/692 (XVIII Atp. CLP) 23. Delegated Regulation (EU) 2023/707 24. Delegated Regulation (EU) 2023/1434 (XIX Atp. CLP) 25. Delegated Regulation (EU) 2023/1435 (XX Atp. CLP) •

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Handling Chemical Safety •

INRS - Fiche Toxicologique (toxicological sheet) •

Patty - Industrial Hygiene and Toxicology

- **NI Sax - Dangerous properties of Industrial Materials-7, 1989 edition**

• IFA GESTIS website

• ECHA website

• Database of SDS templates for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note to users: The information contained in this document is based on our current knowledge at the date of the last version. Users should verify the suitability and completeness of the information provided for their specific use of the product. This document should not be considered a guarantee regarding any specific property of the product. The use of this product is not under our direct control; therefore, users must, at their own risk, comply with current health and safety laws and regulations. The manufacturer is exempt from any liability resulting from improper use.

Provide designated personnel with adequate training on the use of chemicals.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: The classification of the product is derived from the criteria set out in the CLP Regulation, Annex I, Part 2. Data for the evaluation of chemical-physical properties are reported in section 9.
Health hazards: The classification of the product is based on calculation methods according to Annex I to the CLP Regulation, Part 3, unless otherwise stated in Section 11.
Environmental hazards: The classification of the product is based on calculation methods according to Annex I to the CLP Regulation, Part 4, unless otherwise stated in Section 12.
Changes since the previous revision:
The following sections have been modified:
02 / 03 / 04 / 07 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.