



Hardening Epoxy WA
Code: 50917500



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SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 **PRODUCT IDENTIFIER:** Hardening Epoxy WA
Code: 50917500
- 1.2 **RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:**
Intended uses (main technical functions): [X] Industrial [X] Professional [] Consumers
Hardener.
Sectors of use:
Industrial manufacturing (SU3).
Professional uses (SU22).
Uses advised against:
This product is not recommended for any use or sector of use (industrial, professional or consumer) other than those previously listed as 'Intended or identified uses'.
Restrictions on manufacture, placing on market and use, according to Annex XVII of Regulation (EC) No. 1907/2006.
Not restricted.
- 1.3 **DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:**
NEUCE - Indústria de Tintas, S.A.
Rua Francisco Rocha - Aptdo. 4514 - 3700-892 - Romariz SJM (Portugal)
Phone: +351 256 840040 - Fax: +351 256 840049
E-mail address of the person responsible for the Safety Data Sheet:
e-mail: geral@neuce.pt
- 1.4 **EMERGENCY TELEPHONE NUMBER:** +351 256 840041 (9:00-18:30 h.) (working hours)

SECTION 2 : HAZARDS IDENTIFICATION

- 2.1 **CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:**
Classification of mixtures is carried out in accordance with the following principles: a) when data (tests) for the classification of mixtures are available, generally is carried out based on the data, b) in the absence of data (tests) for mixtures are generally used interpolation or extrapolation methods of assessing the risk, using the available data for mixtures similarly classified, and c) in the absence of tests and information which would allow to apply interpolation or extrapolation techniques, methods are used to classify risk assessment based on the data of the individual components in the mixture.
Classification in accordance with Regulation (EU) No. 1272/2008~2018/1480 (CLP):
DANGER: Flam. Liq. 2:H225 | Skin Irrit. 2:H315 | Eye Dam. 1:H318 | STOT SE (irrit.) 3:H335 | STOT SE (narcosis) 3:H336 | STOT RE 2:H373 | Aquatic Chronic 2:H411 | EUH066
- | Danger class | Classification of the mixture | Cat. | Routes of exposure | Target organs | Effects | |
|-----------------------------|---|----------------------|----------------------------------|--|--------------------------------------|---|
| Physicochemical:
 | Flam. Liq. 2:H225
Skin Irrit. 2:H315
Eye Dam. 1:H318
Skin Sens. 1:H317 | c)
c)
c)
c) | Cat.2
Cat.2
Cat.1
Cat.1 | -
Skin
Eyes
Skin | -
Skin
Eyes
Skin | -
Irritation
Serious lesions
Allergy |
| Human health:
 | STOT SE (irrit.) 3:H335
STOT SE (narcosis) 3:H336
STOT RE 2:H373 | c)
c)
c) | Cat.3
Cat.3
Cat.2 | Inhalation
Inhalation
Inhalation | Respiratory tract
CNS
Systemic | Irritation
Narcosis
Damage |
| Environment:
 | Aquatic Chronic 2:H411
EUH066 | c)
c) | Cat.2
- | -
Skin | -
Skin | -
Dryness, Cracking |

Full text of hazard statements mentioned is indicated in section 16.

Note: When in section 3 a range of percentages is used, the health and environmental hazards describe the effects of the highest concentration of each component, but below the maximum value.

- 2.2 **LABEL ELEMENTS:**

This product is labelled with the signal word DANGER in accordance with Regulation (EU) No. 1272/2008~2018/1480 (CLP)
- Hazard statements:**
H225 Highly flammable liquid and vapour.
H373i May cause damage to organs through prolonged or repeated exposure if inhaled.
H335 May cause respiratory irritation.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.
- Precautionary statements:**
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280F Wear protective gloves, clothing and eye protection. In case of inadequate ventilation wear respiratory protection.
P363 Wash contaminated clothing before reuse.



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P303+P361+P353-P352-P312 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash with plenty of soap and water. Call a POISON CENTER or doctor if you feel unwell.
P305+P351+P338-P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P273-P391-P501a Avoid release to the environment. Collect spillage. Dispose of contents/container in accordance with local regulations.

Supplementary statements:

EUH208

Contains triethylenetetramine. May produce an allergic reaction.

Substances that contribute to classification:

Fatty acids C18-dimer and TETA adduct

Xylene (mixture of isomers)

1-methoxy-2-propanol

Isobutylmethylketone

2.3

OTHER HAZARDS:

Hazards which do not result in classification but which may contribute to the overall hazards of the mixture:

Other physicochemical hazards: # No other relevant adverse effects are known.Other adverse human health effects: # No other relevant adverse effects are known.Other negative environmental effects: # Does not contain substances that fulfil the PBT/vPvB criteria.**SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**

3.1

SUBSTANCES:

Not applicable (mixture).

3.2

MIXTURES:

This product is a mixture.

Chemical description:

Solution of fatty acids c18-dimer and tetra adduct.

HAZARDOUS INGREDIENTS:

Substances taking part in a percentage higher than the exemption limit:

40 < 50 %

Fatty acids, C18-unsatd

CAS: 103758-99-2, EC: 500-290-3

CLP: Danger: Skin Irrit. 2:H315 | Eye Dam. 1:H318 | Skin Sens. 1A:H317 | Aquatic Chronic 2:H411

Autoclassified
< REACH

15 < 20 %

Xylene (mixture of isomers)

CAS: 1330-20-7, EC: 215-535-7

REACH: 01-2119488216-32

CLP: Danger: Flam. Liq. 3:H226 | Acute Tox. (inh.) 4:H332 | Acute Tox (skin) 4:H312 | Skin Irrit. 2:H315 | Eye Irrit. 2:H319 | STOT SE (irrit.) 3:H335 | STOT RE 2:H373i | Asp. Tox. 1:H304

Index No. 601-022-00-9
< REACH

15 < 20 %

1-methoxy-2-propanol

CAS: 107-98-2, EC: 203-539-1

REACH: 01-2119457435-35

CLP: Warning: Flam. Liq. 3:H226 | STOT SE (narcosis) 3:H336

Index No. 603-064-00-3
< REACH / ATP01

15 < 20 %

Isobutylmethylketone

CAS: 108-10-1, EC: 203-550-1

REACH: 01-2119473980-30

CLP: Danger: Flam. Liq. 2:H225 | Acute Tox. (inh.) 4:H332 | Eye Irrit. 2:H319 | STOT SE (irrit.) 3:H335 | EUH066

Index No. 606-004-00-4
< REACH / CLP00

2,5 < 5 %

Ethylbenzene

CAS: 100-41-4, EC: 202-849-4

CLP: Danger: Flam. Liq. 2:H225 | Acute Tox. (inh.) 4:H332 | STOT RE 2:H373iE | Asp. Tox. 1:H304 | Aquatic Chronic 3:H412

Index No. 601-023-00-4
< Autoclassified

1 < 2,5 %

Triethylenetetramine

CAS: 112-24-3, EC: 203-950-6

CLP: Danger: Acute Tox. (skin) 4:H312 | Skin Corr. 1B:H314 | Eye Dam. 1:H318 | Skin Sens. 1:H317 | Aquatic Chronic 3:H412

Index No. 612-059-00-5
< AutoclassifiedImpurities:

Does not contain other components or impurities which will influence the classification of the product.

Stabilizers:

None

Reference to other sections:

For more information on hazardous ingredients, see sections 8, 11, 12 and 16.

SUBSTANCES OF VERY HIGH CONCERN (SVHC):

List updated by ECHA on 15/01/2019.

Substances SVHC subject to authorisation, included in Annex XIV of Regulation (EC) no. 1907/2006:

None

Substances SVHC candidate to be included in Annex XIV of Regulation (EC) no. 1907/2006:

None

PERSISTENT, BIOACCUMULABLE AND TOXIC PBT, OR VERY PERSISTENT AND VERY BIOACCUMULABLE VPvB SUBSTANCES:

Does not contain substances that fulfil the PBT/vPvB criteria.



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SECTION 4 : FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST-AID MEASURES:



Symptoms may occur after exposure, so that in case of direct exposure to the product, when in doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. Lifeguards should pay attention to self-protection and use the recommended protective equipment if there is a possibility of exposure. Wear protective gloves when administering first aid.

Route of exposure	Symptoms and effects, acute and delayed	Description of first-aid measures
Inhalation: 	# Inhalation produces irritation to mucus, coughing and breathlessness.	# Remove the patient out of the contaminated area into the fresh air. If breathing is irregular or stops, administer artificial respiration. If the person is unconscious, place in appropriate recovery position. Keep the patient warm and at rest until medical attention arrives.
Skin: 	# Skin contact causes redness and pain.	# Remove immediately contaminated clothing. Wash thoroughly the affected area with plenty of cold or lukewarm water and neutral soap, or use a suitable skin cleanser. Do not use solvents or thinners. In the case of skin reddening or rashes, contact a doctor immediately.
Eyes: 	# Contact with the eyes produces redness, pain and serious burns. Contact with the eyes produces redness, pain, serious burns and loss of vision.	# Remove contact lenses. Rinse eyes copiously by irrigation with plenty of clean, fresh water for at least 15 minutes, holding the eyelids apart, until the irritation is reduced. Call a physician immediately.
Ingestion:	# If swallowed, may cause irritation of the mouth, throat and oesophagus.	# If swallowed, seek medical advice immediately and show container or label. Do not induce vomiting, due to the risk of aspiration. Keep the patient at rest.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

The main symptoms and effects are indicated in sections 4.1 and 11.1

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Notes to physician: # Treatment should be directed at the control of symptoms and the clinical condition of the patient.

Antidotes and contraindications: # Specific antidote not known.

SECTION 5 : FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Extinguishing powder or CO₂. In the case of more important fires, also alcohol resistant foam and water spray/mist.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Fire can produce a dense black smoke. As consequence of combustion or thermal decomposition, hazardous products may be produced: carbon monoxide, carbon dioxide, nitrogen oxides. Exposure to combustion or decomposition products may be a hazard to health.

5.3 ADVICE FOR FIREFIGHTERS:

Special protective equipment: # Depending on magnitude of fire, heat-proof protective clothing may be required, appropriate independent breathing apparatus, gloves, protective glasses or face masks and boots. If the fire-proof protective equipment is not available or is not being used, combat fire from a sheltered position or from a safe distance. The standard EN469 provides a basic level of protection for chemical incidents.

Other recommendations: # Cool with water the tanks, cisterns or containers close to sources of heat or fire. Bear in mind the direction of the wind. Do not allow fire-fighting residue to enter drains, sewers or water courses.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Eliminate possible sources of ignition and when appropriate, ventilate the area. Do not smoke. Avoid direct contact with this product.

6.2 ENVIRONMENTAL PRECAUTIONS:

Avoid contamination of drains, surface or subterranean water and soil. In the case of large scale spills or when the product contaminates lakes, rivers or sewages, inform the appropriate authorities in accordance with local regulations.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Contain and mop up spills with non-combustible absorbent materials (earth, sand, vermiculite, diatomaceous earth, etc...). Clean preferably with a biodegradable detergent. Keep the remains in a closed container.

6.4 REFERENCE TO OTHER SECTIONS:

For contact information in case of emergency, see section 1.
For information on safe handling, see section 7.
For exposure controls and personal protection measures, see section 8.
For waste disposal, follow the recommendations in section 13.



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SECTION 7 : HANDLING AND STORAGE

- 7.1 **PRECAUTIONS FOR SAFE HANDLING:**
 # Comply with the existing legislation on health and safety at work.
General recommendations:
 # Avoid any type of leakage or escape. Keep the container tightly closed.
Recommendations for the prevention of fire and explosion risks:
 # Due to its flammability, this material should only be used in areas from which all naked lights and other sources of ignition have been excluded and away from other heat or electrical sources. Switch mobile phones off and do not smoke. No tools with a potential for sparks should be used.
- | | | | | |
|--|---|---|------------|---------------|
| - Flash point | : | # | 22* | # °C |
| - Autoignition temperature | : | # | 397* | # °C |
| - Upper/lower flammability or explosive limits | : | # | 1.3* - 9.5 | % Volume 25°C |
- Recommendations for the prevention of toxicological risks:**
 # Do not eat, drink or smoke while handling. After handling, wash hands with soap and water. For exposure controls and personal protection measures, see section 8.
Recommendations for the prevention of environmental contamination:
 # Avoid any spillage in the environment. Pay special attention to the cleaning water. In the case of accidental spillage, follow the instructions indicated in section 6.
- 7.2 **CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**
 # Forbid the entry to unauthorized persons. Keep out of reach of children. This product should be stored isolated from heat and electrical sources. Do not smoke in storage area. If possible, avoid direct contact with sunlight. Avoid extreme humidity conditions. In order to avoid leakages, the containers, after use, should be closed carefully and placed in a vertical position. For more information, see section 10.
- | | | | |
|-------------------------------|---|---|--|
| Class of storage | : | # | According to current legislation. |
| Maximum storage period | : | # | 12. months |
| Temperature interval | : | # | min: 5. °C, max: 35. °C (recommended). |
- Incompatible materials:**
 # Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.
Type of packaging:
 # According to current legislation.
Limit quantity (Seveso III): # Directive 2012/18/EU:
 - Named dangerous substances/mixtures: None
 - Hazard categories and lower-/upperthreshold quantities in tonnes (t):
 · Physical hazards: Highly flammable liquid and vapour (P5c) (5000t/50000t).
 · Health hazards: Not applicable
 · Environmental hazards: Toxic to aquatic life with long lasting effects (E2) (200t/500t).
 · Other hazards: Not applicable.
 - Threshold quantity for the application of lower-tier requirements: 200 tons
 - Threshold quantity for the application of upper-tier requirements: 500 tons
 - Remarks:
 The qualifying quantities set out above relate to each establishment. The quantities to be considered for the application of the relevant Articles are the maximum quantities which are present or are likely to be present at any one time. Dangerous substances present at an establishment only in quantities equal to or less than 2 % of the relevant qualifying quantity shall be ignored for the purposes of calculating the total quantity present, if their location within an establishment is such that it cannot act as an initiator of a major accident elsewhere at that establishment. For more details, see note 4 of Annex I of the Seveso Directive.



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- 7.3 **SPECIFIC END USES:**
For the use of this product do not exist particular recommendations apart from that already indicated.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 **CONTROL PARAMETERS:**
If a product contains ingredients with exposure limits, may be necessary a personnel monitoring, work place or biological, to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to EN689, EN14042 and EN482 standard concerning methods for assessing the exposure by inhalation to chemical agents, and exposure to chemical and biological agents. Reference should be also made to national guidance documents for methods for the determination of dangerous substances.

OCCUPATIONAL EXPOSURE LIMIT VALUES (TLV)

AGCIH 2018	Year	TLV-TWA ppm	mg/m ³	TLV-STEL ppm	mg/m ³	Remarks
Xylene	1996	100.	434.	150.	651.	A4 , BEI
1-methoxy-2-propanol	1976	100.	369.	150.	553.	
Isobutylmethylketone	1981	50.	205.	75.	307.	BEI
Ethylbenzene	2002	100.	434.	125.	543.	A3 , BEI

TLV - Threshold Limit Value, TWA - Time Weighted Average, STEL - Short Term Exposure Limit.

A3 - Carcinogenic in animals.

A4 - Non classified as carcinogenic in humans.

BEI - Biological exposure index (biological monitoring).

BIOLOGICAL LIMIT VALUES:

This preparation contains the following substances that have established a biological limit value :

- # Xylenes (technical or commercial grade) (2011): Biological determinant: methylhippuric acids in urine, BEI: 1.5 g/g creatinine, Sampling time: end of shift (2).

- # Methyl isobutyl ketone (2009): Biological determinant: methyl isobutyl ketone in urine, BEI: 1 mg/l, Sampling time: end of shift (2).

- # Ethylbenzene (2013): Biological determinant: sum of mandelic acid and phenylglycolic acid in urine, BEI: 0.15 g/g creatinine Sampling time: end of shift (2), Notation: (Ns).

(2) When the end of the exposition not coincide with the end of the working day, the sample will be taken as soon as possible after the real exposition ceases.

(Ns) Non-specific. The determinant is non-specific, since it is also observed after exposure to other chemicals.

DERIVED NO-EFFECT LEVEL (DNEL):

Derived no-effect level (DNEL) is a level of exposure that is considered safe, derived from toxicity data according to specific guidances included in REACH. DNEL values may differ from a occupational exposure limit (OEL) for the same chemical. OEL values may come recommended by a particular company, a government regulatory agency or an organization of experts. Although considered protective of health, the OEL values are derived by a process different of REACH.

Derived no-effect level, workers:

- Systemic effects, acute and chronic:

Xylene (mixture of isomers)

1-methoxy-2-propanol

Isobutylmethylketone

DNEL Inhalation

mg/m³

289. (a) 77.0 (c)

- (a) 369. (c)

208. (a) 83.0 (c)

DNEL Cutaneous

mg/kg bw/d

s/r (a) 180. (c)

- (a) 50.6 (c)

- (a) 11.8 (c)

DNEL Oral

mg/kg bw/d

- (a) - (c)

- (a) - (c)

- (a) - (c)

Derived no-effect level, workers:

- Local effects, acute and chronic:

Xylene (mixture of isomers)

1-methoxy-2-propanol

Isobutylmethylketone

DNEL Inhalation

mg/m³

289. (a) s/r (c)

554. (a) - (c)

208. (a) 83.0 (c)

DNEL Cutaneous

mg/cm²

s/r (a) s/r (c)

- (a) - (c)

- (a) - (c)

DNEL Eyes

mg/cm²

- (a) - (c)

- (a) - (c)

- (a) - (c)

Derived no-effect level, general population:

Not applicable (product for professional or industrial use).

(a) - Acute, short-term exposure, (c) - Chronic, long-term or repeated exposure.

(-) - DNEL not available (without data of registration REACH).

s/r - DNEL not derived (not identified hazard).



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PREDICTED NO-EFFECT CONCENTRATION (PNEC):

Predicted no-effect concentration, aquatic organisms:

- Fresh water, marine water and intermittent release:

Xylene (mixture of isomers)

1-methoxy-2-propanol

Isobutylmethylketone

PNEC Fresh water

mg/l

0.327

10.0

0.600

PNEC Marine

mg/l

0.327

1.00

0.0600

PNEC Intermittent

mg/l

0.327

100.

1.50

- Wastewater treatment plants (STP) and sediments in fresh- and marine water:

Xylene (mixture of isomers)

1-methoxy-2-propanol

Isobutylmethylketone

PNEC STP

mg/l

6.58

100.

27.5

PNEC Sediments

mg/kg dw/d

12.5

52.3

8.27

PNEC Sediments

mg/kg dw/d

12.5

5.20

0.830

Predicted no-effect concentration, terrestrial organisms:

- Air, soil and effects for predators and humans:

Xylene (mixture of isomers)

1-methoxy-2-propanol

Isobutylmethylketone

PNEC Air

mg/m³

-

-

-

PNEC Soil

mg/kg dw/d

2.31

5.49

1.30

PNEC Oral

mg/kg dw/d

-

-

-

(-) - PNEC not available (without data of registration REACH).



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8.2 EXPOSURE CONTROLS:

ENGINEERING MEASURES:



Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these measures are not sufficient to maintain concentrations of particulates and vapours below the Occupational Exposure Limits, suitable respiratory protection must be worn.

Protection of respiratory system: # Avoid the inhalation of product.

Protection of eyes and face: # Install water taps, sources or eyewash bottles with clean water close to the working area.

Protection of hands and skin: # It is recommended to install water taps or sources with clean water close to the working area. Barrier creams may help to protect the exposed areas of the skin. Barrier creams should not be applied once exposure has occurred.

OCCUPATIONAL EXPOSURE CONTROLS: Regulation (EU) No. 2016/425:

As a general measure on prevention and safety in the work place, we recommend the use of a basic personal protection equipment (PPE), with the corresponding marking. For more information on personal protective equipment (storage, use, cleaning maintenance, type and characteristics of the PPE, protection class, marking, category, CEN norm, etc.), you should consult the informative brochures provided by the manufacturers of PPE.

Mask:



Mask for gases and vapours (EN14387). Class 1: low capacity up to 1000 ppm, Class 2: medium capacity up to 5000 ppm, Class 3: high capacity up to 10000 ppm. In order to obtain a suitable protection level, the filter class must be selected depending on the type and concentration of the contaminating agents present, in accordance with the specifications supplied by the filter producers.

Safety goggles:



Safety goggles with suitable lateral protection (EN166). Clean daily and disinfect at regular intervals in accordance with the instructions of the manufacturer.

Face shield:

No.

Gloves:



Gloves resistant against chemicals (EN374). When repeated or prolonged contact with the product is expected, gloves of protection level 5 or higher should be used, with a breakthrough time of >240 min. When short contact with the product is expected, use gloves with a protection level 2 or higher should be used, with a breakthrough time >30 min. The breakthrough time of the selected glove material should be in accordance with the pretended period of use. There are several factors (for example, temperature), they do in practice the period of use of a protective gloves resistant against chemicals is clearly lower than the established standard EN374. Due to the wide variety of circumstances and possibilities, the instructions/specifications provided by the glove supplier should be taken into account. Use the proper technique of removing gloves (without touching glove's outer surface) to avoid contact of the product with the skin. The gloves should be immediately replaced when any sign of degradation is noted.

Boots:

No.

Apron:

No.

Clothing:

Advisable.

Thermal hazards:

Not applicable (the product is handled at room temperature).

ENVIRONMENTAL EXPOSURE CONTROLS:

Avoid any spillage in the environment.

Spills on the soil: # Prevent contamination of soil.

Spills in water: # Do not allow to escape into drains, sewers or water courses.

- Water Management Act: # This product does not contain any substance included in the list of priority substances in the field of water policy under Directive 2000/60/EC~2013/39/EU.

Emissions to the atmosphere: # Not applicable.



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SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Appearance

- Physical state : # Liquid.
- Colour : Colourless.
- Odour : Characteristic
- Odour threshold : # Not available (mixture).

pH-value

- pH : # Alkaline

Change of state

- Melting point : # Not applicable (mixture).
- Initial boiling point : # 115.9* # °C at 760 mmHg

Density

- Vapour density : # 3.4* at 20°C 1 atm. Relative air
- Relative density : # 0.91 # at 20/4°C Relative water

Stability

- Decomposition temperature : # Not available (technical impossibility to obtain the data).

Viscosity:

- Dynamic viscosity : # 89. cps 20°C
- Kinematic viscosity : # 34. mm²/s at 40°C
- Viscosity (flow time) : # 30. ± 5. # sec.FC4 20°C

Volatility:

- Evaporation rate : # 78.6* nBuAc=100 25°C Relative
- Vapour pressure : # 7* # mmHg at 20°C
- Vapour pressure : # 5.1* kPa at 50°C

Solubility(ies)

- Solubility in water : # Not miscible
- Liposolubility : # Not available (mixture untested).
- Partition coefficient: n-octanol/water : # Not applicable (mixture).

Flammability:

- Flash point : # 22* °C # CLP 2.6.4.3.
- Upper/lower flammability or explosive limits : # 1.3* - 9.5 % Volume 25°C
- Autoignition temperature : # 397* # °C

Explosive properties:

Not available.

Oxidizing properties:

Not classified as oxidizing product.

*Estimated values based on the substances composing the mixture.

9.2 OTHER INFORMATION:

- Solids : # 47. # % Weight
- VOC (supply) : # 482.3 % Weight

The values indicated do not always coincide with product specifications. The data for the product specifications can be found in the corresponding technical data sheet. For additional information concerning physical and chemical properties related to safety and environment, see sections 7 and 12.

SECTION 10 : STABILITY AND REACTIVITY

10.1 REACTIVITY:

Corrosivity to metals: # It is not corrosive to metals.

Pyrophorical properties: # It is not pyrophoric.

10.2 CHEMICAL STABILITY:

Stable under recommended storage and handling conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS:

Possible dangerous reaction with reducing agents, oxidizing agents, acids, alkalis.

10.4 CONDITIONS TO AVOID:

Heat: # Keep away from sources of heat.

Light: # If possible, avoid direct contact with sunlight.

Air: # The product is not affected by exposure to air, but should not be left the containers open.

Humidity: # Avoid extreme humidity conditions.

Pressure: # Not relevant.

Shock: # The product is not sensitive to shocks, but as a recommendation of a general nature should be avoided bumps and rough handling to avoid dents and breakage of packaging, especially when the product is handled in large quantities, and during loading and download operations.

10.5 INCOMPATIBLE MATERIALS:

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS:

As consequence of thermal decomposition, hazardous products may be produced: nitrogen oxides.



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SECTION 11 : TOXICOLOGICAL INFORMATION

No experimental toxicological data on the preparation is available. The toxicological classification for this mixture has been carried out by using the conventional calculation method of the Regulation (EU) No. 1272/2008~2018/1480 (CLP).

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

ACUTE TOXICITY:Dose and lethal concentrations

for individual ingredients :

Fatty acids C18-dimer and TETA adduct
Xylene (mixture of isomers)
1-methoxy-2-propanol
Isobutylmethylketone
Ethylbenzene
Triethylenetetramine

LD50 (OECD 401)

mg/kg bw oral

> 2000. Rat
4300. Rat
4016. Rat
2080. Rat
3500. Rat
1716. Rat

LD50 (OECD 402)

mg/kg bw cutaneous

> 2000. Rat
1700. Rabbit
13000. Rabbit
> 20000. Rabbit
15400. Rabbit
1465. Rabbit

LC50 (OECD 403)

mg/m3-4h inhalation

> 22080. Rat
> 54600. Rat
> 8200. Rat
> 17400. Rat

Estimates of acute toxicity (ATE)

for individual ingredients :

Xylene (mixture of isomers)
Isobutylmethylketone
Ethylbenzene
Triethylenetetramine

ATE

mg/kg bw oral

-
-
-
-

ATE

mg/kg bw cutaneous

1100.*
-
-
1465.

ATE

mg/m3-4h inhalation

11000.* Vapours
11000.* Vapours
17400. Vapours
-

(*) - Point estimates of acute toxicity corresponding to the classification category (see GHS/CLP Table 3.1.2). These values are designed to be used in the calculation of the ATE for classification of a mixture based on its components and do not represent test results.

(-) - The components that are assumed to have no acute toxicity at the upper threshold of category 4 for the corresponding exposure route are ignored.

No observed adverse effect level

Not available

Lowest observed adverse effect level

Not available

INFORMATION ON LIKELY ROUTES OF EXPOSURE: Acute toxicity:

Routes of exposure	Acute toxicity	Cat.	Main effects, acute and/or delayed	Criteria
<u>Inhalation:</u> Not classified	ATE > 20000 mg/m3	-	* Not classified as a product with acute toxicity if inhaled (based on available data, the classification criteria are not met).	GHS/CLP 3.1.3.6.
<u>Skin:</u> Not classified	ATE > 2000 mg/kg bw	-	* Not classified as a product with acute toxicity in contact with skin (based on available data, the classification criteria are not met).	GHS/CLP 3.1.3.6.
<u>Eyes:</u> Not classified	Not available	-	* Not classified as a product with acute toxicity by eye contact (lack of data).	GHS/CLP 1.2.5.
<u>Ingestion:</u> Not classified	ATE > 2000 mg/kg bw	-	* Not classified as a product with acute toxicity if swallowed (based on available data, the classification criteria are not met).	GHS/CLP 3.1.3.6.

GHS/CLP 3.1.3.6: Classification of mixtures based on ingredients of the mixture (additivity formula).

CORROSION / IRRITATION / SENSITISATION:

Danger class	Target organs	Cat.	Main effects, acute and/or delayed	Criteria
<u>Respiratory corrosion/irritation:</u> 	Respiratory tract 	Cat.3	* IRRITANT: May cause respiratory irritation.	GHS/CLP 1.2.6. 3.8.3.4.
<u>Skin corrosion/irritation:</u> 	Skin 	Cat.2	* IRRITANT: Causes skin irritation.	GHS/CLP 3.2.3.3.
<u>Serious eye damage/irritation:</u> 	Eyes 	Cat.1	* DAMAGE: Causes serious eye damage.	GHS/CLP 3.3.3.3.
<u>Respiratory sensitisation:</u> Not classified	-	-	* Not classified as a product sensitising by inhalation (based on available data, the classification criteria are not met).	GHS/CLP 3.4.3.3.
<u>Skin sensitisation:</u> 	Skin 	Cat.1	* SENSITISING: May cause an allergic skin reaction.	GHS/CLP 3.4.3.3.

GHS/CLP 3.2.3.3: Classification of the mixture when data are available for all components or only for some components.

GHS/CLP 3.3.3.3: Classification of the mixture when data are available for all components or only for some components.

GHS/CLP 3.4.3.3: Classification of the mixture when data are available for all components or only for some components.

GHS/CLP 3.8.3.4: Classification of the mixture when data are available for all components or only for some components.



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ASPIRATION HAZARD:

Danger class	Target organs	Cat.	Main effects, acute and/or delayed	Criteria
<u>Aspiration hazard:</u> Not classified	-	-	# Not classified as a product hazardous by aspiration (based on available data, the classification criteria are not met).	GHS/CLP 3.10.3.3.

GHS/CLP 3.10.3.3: Classification of the mixture when data are available for all components or only for some components.

SPECIFIC TARGET ORGANS TOXICITY (STOT): Single exposure (SE) and/or Repeated exposure (RE):

Effects	SE/RE	Target organs	Cat.	Main effects, acute and/or delayed	Criteria
<u>Systemic:</u> 	RE	Systemic 	Cat.2	# HARMFUL: May cause damage to organs through prolonged or repeated exposure if inhaled.	GHS/CLP 3.8.3.4.
<u>Respiratory:</u> 	SE	Respiratory tract 	Cat.3	# IRRITANT: May cause respiratory irritation.	GHS/CLP 3.8.3.4.
<u>Cutaneous:</u>	RE	Skin 	-	# DEFATTENING: Repeated exposure may cause skin dryness or cracking.	GHS/CLP 1.2.4.
<u>Neurological:</u> 	SE	CNS 	Cat.3	# NARCOSIS: May cause drowsiness or dizziness if inhaled.	GHS/CLP 3.8.3.4.

GHS/CLP 3.8.3.4: Classification of the mixture when data are available for all components or only for some components.

CMR EFFECTS:

Carcinogenic effects: # It is not considered as a carcinogenic product.

Genotoxicity: # It is not considered as a mutagenic product.

Toxicity for reproduction: # Does not harm fertility. Does not harm the unborn child.

Effects via lactation: # Not classified as a hazardous product for children breast-fed.

DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHRONIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE:

Routes of exposure: # Not available.

Short-term exposure: # Harmful by inhalation. Harmful in contact with skin. May irritate the eyes and skin. Irritating to skin. May cause sensitization by skin contact.

Long-term or repeated exposure: # Not available.

INTERACTIVE EFFECTS:

Not available.

INFORMATION ABOUT TOXICOKINETICS, METABOLISM AND DISTRIBUTION:

Dermal absorption: # Not available.

Basic toxicokinetics: # Not available.

ADDITIONAL INFORMATION:

Not available.

SECTION 12 : ECOLOGICAL INFORMATION

No experimental ecotoxicological data on the preparation as such is available. The ecotoxicological classification for this mixture has been carried out by using the conventional calculation method of the Regulation (EU) No. 1272/2008~2018/1480 (CLP).

12.1

TOXICITY:Acute toxicity in aquatic environment

for individual ingredients :

Fatty acids C18-dimer and TETA adduct

Xylene (mixture of isomers)

1-methoxy-2-propanol

Isobutylmethylketone

Ethylbenzene

Triethylenetetramine

LC50 (OECD 203)

mg/l-96hours

> 7.1 Fishes

> 14. Fishes

20800. Fishes

179. Fishes

> 12. Fishes

330. Fishes

EC50 (OECD 202)

mg/l-48hours

> 7.1 Daphnia

> 16. Daphnia

23300. Daphnia

200. Daphnia

> 1.8 Daphnia

> 31. Daphnia

EC50 (OECD 201)

mg/l-72hours

> 4.3 Algae

> 10. Algae

> 1000. Algae

400. Algae

> 33. Algae

> 20. Algae

No observed effect concentration

Isobutylmethylketone

NOEC (OECD 210)

mg/l-28days

NOEC (OECD 211)

mg/l-21days

30. Daphnia

NOEC (OECD 201)

mg/l-72hours

Lowest observed effect concentration

Not available



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ASSESSMENT OF AQUATIC TOXICITY:

Aquatic toxicity	Cat.	Main hazards to the aquatic environment	Criteria
<u>Acute aquatic toxicity:</u> Not classified	-	# Not classified as a hazardous product with acute toxicity to aquatic life (based on available data, the classification criteria are not met).	GHS/CLP 4.1.3.5.5.3.
<u>Chronic aquatic toxicity:</u> 	Cat.2	# TOXIC: Toxic to aquatic life with long lasting effects.	GHS/CLP 4.1.3.5.5.4.

CLP 4.1.3.5.5.3: Classification of a mixture for acute hazards, based on summation of classified components.

CLP 4.1.3.5.5.4: Classification of a mixture for chronic (long term) hazards, based on summation of classified components.

12.2 PERSISTENCE AND DEGRADABILITY:

Not available.

<u>Aerobic biodegradation</u> for individual ingredients :	<u>DOO</u> mgO ₂ /g	<u>%DBO/DOO</u> 5 days 14 days 28 days	<u>Biodegradability</u>
Fatty acids C18-dimer and TETA aduct			Not easy
Xylene (mixture of isomers)	2620.	~ 52. ~ 81. ~ 88.	Easy
1-methoxy-2-propanol	1953.	~ 27. ~ 96.	Easy
Isobutylmethylketone	2716.		Easy
Ethylbenzene	3164.	~ 30. ~ 68. ~ 79.	Easy
Triethylenetetramine			Not easy

Note: Biodegradability data correspond to an average of data from various bibliographic sources.

12.3 BIOACCUMULATIVE POTENTIAL:

May bioaccumulate.

<u>Bioaccumulation</u> for individual ingredients :	<u>log Pow</u>	<u>BCF</u> l/kg	<u>Potential</u>
Fatty acids C18-dimer and TETA aduct	10.3	77. (calculated)	Not available
Xylene (mixture of isomers)	3.16	57. (calculated)	Not available
1-methoxy-2-propanol	-0.490	3.2 (calculated)	Not available
Isobutylmethylketone	1.19	3.5 (calculated)	Not available
Ethylbenzene	3.15	56. (calculated)	Not available
Triethylenetetramine	-2.65	3.2 (calculated)	Not available

12.4 MOBILITY IN SOIL:

Not available.

<u>Mobility</u> for individual ingredients :	<u>log Koc</u>	<u>Constant of Henry</u> Pa·m ³ /mol 20°C	<u>Potential</u>
Fatty acids C18-dimer and TETA aduct	9.91		Not available
Xylene (mixture of isomers)	2.25	660. (calculated)	Not available
1-methoxy-2-propanol	0.150	0.093 (calculated)	Not available
Isobutylmethylketone	1.80		Not available
Ethylbenzene	2.23	798. (calculated)	Not available
Triethylenetetramine	-0.670		Not available

12.5 RESULTS OF PBT AND VPVB ASSESMENT: Annex XIII of Regulation (EC) no. 1907/2006:

Does not contain substances that fulfil the PBT/vPvB criteria.

12.6 OTHER ADVERSE EFFECTS:

Ozone depletion potential: # Not available.

Photochemical ozone creation potential: # Not available.

Earth global warming potential: # In case of fire or incineration liberates CO₂.

Endocrine disrupting potential: # Not available.

SECTION 13 : DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS: # Directive 2008/98/EC~Regulation (EU) no. 1357/2014:

Take all necessary measures to prevent the production of waste whenever possible. Analyse possible methods for revaluation or recycling. Do not discharge into drains or the environment, dispose at an authorised waste collection point. Waste should be handled and disposed in accordance with current local and national regulations. For exposure controls and personal protection measures, see section 8.

Disposal of empty containers: # Directive 94/62/EC~2015/720/EU, Decision 2000/532/EC~2014/955/EU:

Emptied containers and packaging should be disposed in accordance with currently local and national regulations. The classification of packaging as hazardous waste will depend on the degree of emptying of the same, being the holder of the residue responsible for their classification, in accordance with Chapter 15 01 of Decision 2000/532/EC, and forwarding to the appropriate final destination. With contaminated containers and packaging, adopt the same measures as for the product in itself.

Procedures for neutralising or destroying the product:

Controlled incineration in special facilities for chemical waste, in accordance with local regulations.



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SECTION 14 : TRANSPORT INFORMATION

14.1	<u>UN NUMBER:</u> 1263	
14.2	<u>UN PROPER SHIPPING NAME:</u> PAINT	
14.3	<p><u>TRANSPORT HAZARD CLASS(ES):</u></p> <p><u>Transport by road (ADR 2019) and Transport by rail (RID 2019):</u></p> <ul style="list-style-type: none"> - Class: 3 - Packing group: III - Classification code: F1 - Tunnel restriction code: (E) - Transport category: 3, max. ADR 1.1.3.6. 1000 L - Limited quantities: 5 L (see total exemptions ADR 3.4) - Transport document: Consignment paper. - Instructions in writing: ADR 5.4.3.4 <p><u>Transport by sea (IMDG 38-16):</u></p> <ul style="list-style-type: none"> - Class: 3 - Packing group: III - Emergency Sheet (EmS): F-E,S_E - First Aid Guide (MFAG): 310,313 - Marine pollutant: Yes. - Transport document: Shipping Bill of lading. <p><u>Transport by air (ICAO/IATA 2018):</u></p> <ul style="list-style-type: none"> - Class: 3 - Packing group: III - Transport document: Air Bill of lading. <p><u>Transport by inland waterways (ADN):</u> # Not available.</p>	<p>FP<23°C, viscous according 2.2.3.1.4. <450 L (ADR) or 2.3.2.2. <30 L (IMDG) or 3.3.3.1.1. <30 L (IATA), VP<110 kPa50°C</p>
14.4	<u>PACKING GROUP:</u> See section 14.3	
14.5	<u>ENVIRONMENTAL HAZARDS:</u> # Classified as hazardous for the environment.	
14.6	<u>SPECIAL PRECAUTIONS FOR USER:</u> # Ensure that persons transporting the product know what to do in case of accident or spill. Always transport in closed containers that are upright and secure. Ensure adequate ventilation.	
14.7	<u>TRANSPORT IN BULK ACCORDING TO ANNEX I OF MARPOL 73/78 AND THE IBC CODE:</u> # Not applicable.	

SECTION 15 : REGULATORY INFORMATION

15.1	<p><u>EU SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC:</u> The regulations applicable to this product generally are listed throughout this Safety Data Sheet.</p> <p><u>Restrictions on manufacture, placing on market and use:</u> See section 1.2</p> <p><u>Tactile warning of danger:</u> Not applicable (product for professional or industrial use).</p> <p><u>Child safety protection:</u> Not applicable (the classification criteria are not met).</p> <p><u>OTHER REGULATIONS:</u></p> <p><u>Responsabilidade ambiental:</u> A utilização deste produto em Portugal fica sujeita ao regime de responsabilidade ambiental previsto no DL.147/2008.</p> <p><u>Control of the risks inherent in major accidents (Seveso III):</u> See section 7.2</p> <p><u>Other local legislations:</u> # The receiver should verify the possible existence of local regulations applicable to the chemical.</p>
15.2	<p><u>CHEMICAL SAFETY ASSESSMENT:</u> # A chemical safety assessment has not been carried out for this mixture.</p>



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SECTION 16 : OTHER INFORMATION

TEXT OF THE PHRASES AND NOTES REFERENCED IN SECTIONS 2 AND/OR 3:

Hazard statements according the Regulation (EU) No. 1272/2008~2018/1480 (CLP), Annex III:

H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects. EUH066 Repeated exposure may cause skin dryness or cracking. H373i May cause damage to organs through prolonged or repeated exposure if inhaled. H373E May cause damage to hearing organs through prolonged or repeated exposure if inhaled.

EVALUATION OF THE INFORMATION ON THE DANGER OF MIXTURES: See sections 9.1, 11.1 and 12.1.

ADVICES ON ANY TRAINING APPROPRIATE FOR WORKERS:

It is recommended for all staff that will handle this product to carry out a basic training in occupational risk and prevention, in order to provide understanding and interpretation of Safety Data Sheets and labelling of products as well.

MAIN LITERATURE REFERENCES AND SOURCES FOR DATA:

- # · European Chemicals Agency: ECHA, <http://echa.europa.eu/>
- # · Access to European Union Law, <http://eur-lex.europa.eu/>
- Industrial Solvents Handbook, Ibert Mellan (Noyes Data Co., 1970).
- Threshold Limit Values, (AGCIH, 2017).
- European agreement on the international carriage of dangerous goods by road, (ADR 2019).
- International Maritime Dangerous Goods Code IMDG including Amendment 38-16 (IMO, 2016).

ABBREVIATIONS AND ACRONYMS:

List of abbreviations and acronyms that can be used (but not necessarily used) in this Safety Data Sheet:

- # · REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.
- # · GHS: Globally Harmonized System of Classification and Labelling of Chemicals of the United Nations.
- # · CLP: European regulation on Classification, Labelling and Packaging of substances and chemical mixtures.
- # · EINECS: European Inventory of Existing Commercial Chemical Substances.
- # · ELINCS: European List of Notified Chemical Substances.
- # · CAS: Chemical Abstracts Service (Division of the American Chemical Society).
- # · UVCB: Substances of Unknown or Variable composition, complex reaction products or biological materials.
- # · SVHC: Substances of Very High Concern.
- # · PBT: Persistent, bioaccumulable and toxic substances.
- # · vPvB: Very persistent and very bioaccumulable substances.
- # · DNEL: Derived No-Effect Level (REACH).
- # · PNEC: Predicted No-Effect Concentration (REACH).
- # · LD50: Lethal dose, 50 percent.
- # · LC50: Lethal concentration, 50 percent.
- # · UN: United Nations Organisation.
- # · ADR: European agreement concerning the international carriage of dangerous goods by road.
- # · RID: Regulations concerning the international transport of dangerous goods by rail.
- # · IMDG: International Maritime code for Dangerous Goods.
- # · IATA: International Air Transport Association.
- # · ICAO: International Civil Aviation Organization.

SAFETY DATA SHEET REGULATIONS:

Safety Data Sheet in accordance with Article 31 of Regulation (EC) No. 1907/2006 (REACH) and Annex of Regulation (EU) No. 2015/830.

HISTORIC:

Version: 5 Revision:
04/02/2019

Version: 6 11/02/2020

Changes since previous Safety Data Sheet:

Legislative, contextual, numerical, methodological and normative changes since the previous version of the present Safety Data Sheet are identified by a red-italic hash (#).

The information of this Safety Data Sheet, is based on the present state of knowledge and on current UE and national laws, as the users' working conditions are beyond our knowledge and control. The product is not to be used for other purposes than those specified, without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation. The information in this Safety Data Sheet is meant as a description of the safety requirements of the product and it is not to be considered as a guarantee of the product's properties.