isaval pinturas

ENDURECEDOR ESMALTE 2KR ACQUA

Code : 0068

Version: 4 **Revision: 16/05/2024** Previous revision: 01/06/2023 Date of printing: 16/05/2024

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

1.1 PRODUCT IDENTIFIER:

ENDURECEDOR ESMALTE 2KR ACQUA
Code : 0068 UFI: 8U50-A07S-E009-T84T

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

Intended uses (main technical functions): [ ] Industrial [X] Professional [X] Consumers

Hardener, in combination with hydroxylated polymers, mainly polyesters and polyacrylates, in order to prepare 2 component systems.

Sectors of use:

Consumer uses (SU21),
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:

Contains diisocyanates: Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless: (a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requeriments referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: 'As from 24 August 2023 adequate training is required before industrial or professional use'. For more details consult the original legislative text.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:

PINTURAS ISAVAL, S.L.
c/Velluters, Parcela 2-14- P.I. Casanova - 46394 Ribarroja del Turia (Valencia) ESPAÑA
Phone number: +34 96 1640001 - Fax: +34 96 1640002 - www.isaval.es

- E-mail address of the person responsible for the Safety Data Sheet:

atencionalcliente@isaval.es

1.4 EMERGENCY TELEPHONE NUMBER:

+34 96 1640001 8:00-18:00 h.

NPIS National Poisons Information Service (NPIS) - In England, Wales or Scotland: dial 111 - In N Ireland: contact your local GP or pharmacist during normal 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 these 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.

The classification as corrosive has been carried out having in mind the criteria of corrosivity by pH.

Classification in accordance with Regulation (EU) No. 1272/2008~2022/692 (CLP):

DANGER:Acute Tox. (inh.) 4:H332|Skin Irrit. 2:H315|Eye Dam. 1:H318|Skin Sens. 1:H317|STOT SE (irrit.) 3:H335|Aquatic Chronic 3:H412

Danger class	Classification of the mixture	Cat.	Routes of exposure	Target organs	Effects
Physicochemical: Not classified					
Human health:	Acute Tox. (inh.) 4:H332 c) Skin Irrit. 2:H315 c) Eye Dam. 1:H318 c) Skin Sens. 1:H317 c) STOT SE (irrit.) 3:H335 c)	Cat.4 Cat.2 Cat.1 Cat.1 Cat.3	Inhalation Skin Eyes Skin Inhalation	- Skin Eyes Skin Respiratory tract	Harmful Irritation Serious lesions Allergy Irritation
Environment:	Aquatic Chronic 3:H412 c)	Cat.3	-	-	-

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. 1272/2008~2022/692 (CLP).

#- Hazard statements:

H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

#- Precautionary statements:

P102	Keep out of reach of children.
P280	Wear protective gloves, clothing and eye protection. In case of inadequate ventilation wear respiratory protection.
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 water and soap.. Call a POISON CENTER or doctor if you feel unwell.
P304+P340-P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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.
P308+P310+P101	IF exposed or concerned: Immediately call a POISON CENTER or doctor. If medical advice is needed, have product container or label at hand.
P273-P501	Avoid release to the environment. Dispose of contents/container in accordance with local regulations.

- Supplementary statements:

EUH204	Contains isocyanates. May produce an allergic reaction.
-	As from 24 August 2023 adequate training is required before industrial or professional use.

- Substances that contribute to classification:

HDI oligomers, isocyanurate
Tridecyl phosphate ethoxylated
Ethyldiisopropylamine
n-butyl hydrogenphosphate

Other sensitizing components:

Hexamethylene-1,6-diisocyanate

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:

Prolonged exposure to vapours may produce transient drowsiness. Prolonged contact may cause skin dryness. People with hypersensitive respiratory tract (by instance, asthma or chronical bronchitis) should not handle this product.

- Other negative environmental effects:

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

Endocrine disrupting properties:

This product does not contain substances with endocrine disrupting properties identified or under evaluation.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCES:

Not applicable (mixture).

3.2 MIXTURES:

This product is a mixture.

Chemical description:

HDI oligomers, isocyanurate

HAZARDOUS INGREDIENTS:

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

80 < C < 90 %	HDI oligomers, isocyanurate CAS: 28182-81-2, EC: 931-274-8, REACH: 01-2119485796-17 CLP: Warning: Acute Tox. (inh.) 4:H332 (ATE=11000 mg/m3) | Skin Sens. 1:H317 | STOT SE (irrit.) 3:H335	Autoclassified REACH	
2,5 < C < 5 %	Tridecyl phosphate ethoxylated CAS: 9046-01-9, EC: 618-558-4 CLP: Danger: Skin Irrit. 2:H315 | Eye Dam. 1:H318 | Aquatic Chronic 2:H411	Autoclassified	
1 < C < 2,5 %	Ethyldiisopropylamine CAS: 7087-68-5, EC: 230-392-0, REACH: 01-2119973181-39 CLP: Danger: Flam. Liq. 2:H225 | Acute Tox. (inh.) 3:H331 (ATE=2630 mg/m3) | Acute Tox. (oral) 4:H302 (ATE=317 mg/kg) | Eye Dam. 1:H318 | STOT SE (irrit.) 3:H335	Autoclassified REACH	
1 < C < 2 %	n-butyl hydrogenphosphate CAS: 12788-93-1, EC: 235-826-2, REACH: 01-2119970716-27 CLP: Danger: Skin Corr. 1B:H314	Autoclassified REACH	
C < 0,5 %	Hexamethylene-1,6-diisocyanate CAS: 822-06-0, EC: 212-485-8, REACH: 01-2119457571-37 CLP: Danger: Acute Tox. (inh.) 1:H330 (ATE=124 mg/m3) | Acute Tox. (oral) 4:H302 (ATE=738 mg/kg) | Skin Irrit. 2:H315 | Eye Irrit. 2:H319 | Resp. Sens. 1:H334 | Skin Sens. 1:H317 | STOT SE (irrit.) 3:H335	REACH	Resp. Sens. 1, H334: C ≥0,5 % Skin Sens. 1, H317: C ≥0,5 %

Impurities:

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 23/01/2024.

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.

POP substances included in the (EU) REGULATION 2019/1021~2020/784 on persistent organic pollutants:

None.

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 of solvent vapours may produce headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, unconsciousness.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.Prolonged contact may cause skin dryness.	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.
Eyes:	Contact with the eyes produces redness, pain and serious burns.	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 throat, abdominal pain, drowsiness, nausea, vomiting and diarrhoea.	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.

isaval pinturas

ENDURECEDOR ESMALTE 2KR ACQUA

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Version: 4 **Revision: 16/05/2024** Previous revision: 01/06/2023 Date of printing: 16/05/2024

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Extinguishing powder or CO2.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

As consequence of combustion or thermal decomposition, hazardous products may be produced: carbon monoxide, Carbon dioxide, nitrogen oxides, isocyanate vapors, traces of hydrocyanic acid, phosphorus 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.Avoid breathing vapours.Keep people without protection in opposition to the wind direction.

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..). The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises: water, ethanol or isopropanol and concentrated ammonia solution (d=0,880) = 45/50/5 parts by volume. Another possible (non-flammable) decontaminant is made up of water and sodium carbonate = 95/5 parts by weight. Add the same decontaminant to any residues and allow to stand for several days in an un-sealed container until no further reaction occurs. 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.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Comply with the existing legislation on health and safety at work.

- General recommendations:

Use in areas free from sources of ignition and away from heat or electrical sources.Do not smoke.Avoid any type of leakage or escape.Keep the container tightly closed.

- Recommendations for the prevention of fire and explosion risks:

Vapours are heavier than air, may spread along floors to a considerable distance, can form explosive mixtures with air and are able to reach distant ignition sources and flame up or explode.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.Do not smoke.

Flashpoint	108* ºC (Pensky-Martens)	CLP 2.6.4.3.
Autoignition temperature:	Not applicable (do not sustain combustion).	

- Recommendations for the prevention of toxicological risks:

People with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which isocyanate containing products are used.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 away from food, drink and animal foodstuffs. 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. Precautions should be taken to minimise exposure to atmospheric humidity or water, as carbon dioxide may be formed which, in closed containers can result in pressurisation. Care should be taken when re-opening partly used containers. Due to the sensitivity to humidity of the isocyanates, this product should be kept in the original container, or under pressure of dried nitrogen, for example. 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 store:

According to current legislation.

- Maximum storage period:

24 Months.

- Temperature interval:

min:5 ºC, max:40 ºC (recommended).

- Incompatible materials:

Keep away from water, alkalis, amines, alcohols, oxidizing agents, acids.Clean the application equipment with a compatible solvent.

isaval pinturas

ENDURECEDOR ESMALTE 2KR ACQUA

Code : 0068

Version: 4 **Revision: 16/05/2024** Previous revision: 01/06/2023 Date of printing: 16/05/2024

- Type of packaging:

According to current legislation.

- Limit quantity (Seveso III): Directive 2012/18/EU:

Not applicable (product for non industrial use).

7.3 SPECIFIC END USE(S):

For the use of this product particular recommendations apart from that already indicated are not available.

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 assesing 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 (WEL)

EH40/2005 WELs (United Kingdom) 2018	Year	WEL-TWA ppm	WEL-TWA mg/m3	WEL-STEL ppm	WEL-STEL mg/m3	Remarks
n-butyl hydrogenphosphate	1976	1	8,5	2	17	
Hexamethylene-1,6-diisocyanate	1988	0,005	0,034	-	-	BMGV

WEL - Workplace Exposure Limit, TWA - Time Weighted Average (8 hours), STEL - Short Term Exposure Limit (15 min).
BMGV - Biological monitoring guidance value. BMGVs are non-statutory and any biological monitoring undertaken in association with a guidance value needs to be conducted on a voluntary basis (ie with the fully informed consent of all concerned).

- BIOLOGICAL LIMIT VALUES:

Not established

- 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:	DNEL Inhalation mg/m3		DNEL Cutaneous mg/kg bw/d		DNEL Oral mg/kg bw/d	
HDI oligomers, isocyanurate	s/r (a)	s/r (c)	s/r (a)	s/r (c)	- (a)	- (c)
Ethyldiisopropylamine	12,6 (a)	4,2 (c)	s/r (a)	2,96 (c)	- (a)	- (c)
Tridecyl phosphate ethoxylated	- (a)	- (c)	- (a)	- (c)	- (a)	- (c)
n-butyl hydrogenphosphate	872,4 (a)	7,05 (c)	123,7 (a)	1 (c)	- (a)	- (c)
Hexamethylene-1,6-diisocyanate	0,07 (a)	0,035 (c)	- (a)	- (c)	- (a)	- (c)

- DERIVED NO-EFFECT LEVEL, WORKERS:- Local effects, acute and chronic:	DNEL Inhalation mg/m3		DNEL Cutaneous mg/cm2		DNEL Eyes mg/cm2	
HDI oligomers, isocyanurate	1 (a)	0,5 (c)	a/r (a)	a/r (c)	s/r (a)	- (c)
Ethyldiisopropylamine	12,6 (a)	4,2 (c)	b/r (a)	- (c)	m/r (a)	- (c)
Tridecyl phosphate ethoxylated	- (a)	- (c)	- (a)	- (c)	- (a)	- (c)
n-butyl hydrogenphosphate	s/r (a)	s/r (c)	m/r (a)	m/r (c)	m/r (a)	- (c)
Hexamethylene-1,6-diisocyanate	0,07 (a)	0,035 (c)	- (a)	- (c)	- (a)	- (c)

- DERIVED NO-EFFECT LEVEL, GENERAL POPULATION:- Systemic effects, acute and chronic:	DNEL Inhalation mg/m3		DNEL Cutaneous mg/kg bw/d		DNEL Eyes mg/kg bw/d	
HDI oligomers, isocyanurate	s/r (a)	s/r (c)	s/r (a)	s/r (c)	s/r (a)	s/r (c)
Ethyldiisopropylamine	- (a)	0,5 (c)	- (a)	- (c)	- (a)	1,05 (c)
Tridecyl phosphate ethoxylated	- (a)	- (c)	- (a)	- (c)	- (a)	- (c)
n-butyl hydrogenphosphate	215,1 (a)	1,7 (c)	61,9 (a)	0,5 (c)	- (a)	m/r (c)
Hexamethylene-1,6-diisocyanate	- (a)	- (c)	- (a)	- (c)	- (a)	- (c)

- LOCAL EFFECTS, ACUTE AND CHRONIC:- Local effects, acute and chronic:	DNEL Inhalation mg/m3		DNEL Cutaneous mg/cm2		DNEL Eyes mg/cm2	
HDI oligomers, isocyanurate	s/r (a)	s/r (c)	s/r (a)	s/r (c)	s/r (a)	- (c)
Ethyldiisopropylamine	- (a)	0,5 (c)	- (a)	- (c)	m/r (a)	- (c)
Tridecyl phosphate ethoxylated	- (a)	- (c)	- (a)	- (c)	- (a)	- (c)
n-butyl hydrogenphosphate	s/r (a)	s/r (c)	m/r (a)	m/r (c)	- (a)	- (c)
Hexamethylene-1,6-diisocyanate	- (a)	- (c)	- (a)	- (c)	- (a)	- (c)

(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).
b/r - DNEL not derived (low hazard).
m/r - DNEL not derived (medium hazard).
a/r - DNEL not derived (high hazard).

isaval pinturas

ENDURECEDOR ESMALTE 2KR ACQUA

Code : 0068

Version: 4 **Revision: 16/05/2024** Previous revision: 01/06/2023 Date of printing: 16/05/2024

- PREDICTED NO-EFFECT CONCENTRATION (PNEC):

- PREDICTED NO-EFFECT CONCENTRATION, AQUATIC ORGANISMS:- Fresh water, marine water and intermittent release:	PNEC Fresh water mg/l	PNEC Marine mg/l	PNEC Intermittent mg/l
HDI oligomers, isocyanurate	0.127	0.0127	1.27
Ethyldiisopropylamine	0.173	0.0173	0.281
Tridecyl phosphate ethoxylated	-	-	-
n-butyl hydrogenphosphate	0.1	0.01	1
Hexamethylene-1,6-diisocyanate	0.0774	0.00774	0.774
- WASTEWATER TREATMENT PLANTS (STP) AND SEDIMENTS IN FRESH- AND MARINE WATER:	**PNEC STP mg/l**	**PNEC Sediments mg/kg dw/d**	**PNEC Sediments mg/kg dw/d**
HDI oligomers, isocyanurate	38.3	266700	26670
Ethyldiisopropylamine	9.12	41.09	4.11
Tridecyl phosphate ethoxylated	-	-	-
n-butyl hydrogenphosphate	100	0.391	0.0392
Hexamethylene-1,6-diisocyanate	8.42	0.01334	0.001334
- PREDICTED NO-EFFECT CONCENTRATION, TERRESTRIAL ORGANISMS:- Air, soil and effects for predators and humans:	**PNEC Air mg/m3**	**PNEC Soil mg/kg dw/d**	**PNEC Oral mg/kg dw/d**
HDI oligomers, isocyanurate	s/r	53182	n/b
Ethyldiisopropylamine	s/r	8.12	n/b
Tridecyl phosphate ethoxylated	-	-	-
n-butyl hydrogenphosphate	s/r	0.0197	4
Hexamethylene-1,6-diisocyanate	-	0.0026	-

(-) - PNEC not available (without data of registration REACH).
n/b - PNEC not derived (not bioaccumulative potential).
s/r - PNEC not derived (not identified hazard).

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 vapours.

- Protection of eyes and face:

Install water taps or sources 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: ✓	For short periods of work, you can consider the utilisation of a combination mask with gas and particle filters, type A2-P2 (EN14387/EN143).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.If the working area is insufficiently ventilated, or when operators, whether spraying or not, are inside the spraybooth,
Safety goggles: ✓	Safety goggles designed to protect against liquid splashes, 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. Avoid any release into the atmosphere.

- 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:

Because of volatility, emissions to the atmosphere while handling and use may result. Avoid any release into the atmosphere.

isaval pinturas

ENDURECEDOR ESMALTE 2KR ACQUA

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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).	

Change of state

Freezing point:	Not available (mixture).	
Initial boiling point:	Not available.	

- Flammability:

Flashpoint	108* ºC (Pensky-Martens)	CLP 2.6.4.3.
Lower/upper flammability or explosive limits:	Not available	
Autoignition temperature:	Not applicable (do not sustain combustion).	

Stability

Decomposition temperature:	250,00* ºC	

pH-value

pH:	Not applicable (non-aqueous media).	

- Viscosity:

Dynamic viscosity:	854 cps at 20ºC	
Kinematic viscosity:	250 mm2/s at 40ºC	
Viscosity (flow time):	60 sec. CF6 at 20ºC	

- Solubility(ies):

Solubility in water	Not applicable	
Liposolubility:	Not applicable (inorganic product).	
Partition coefficient: n-octanol/water:	5,14* (as log Pow)	

- Volatility:

Vapour pressure:	Not applicable.	
Evaporation rate:	Not available (lack of data).	

Density

Relative density:	1,140* at 20/4ºC	Relative water
Relative vapour density:	Not available.	

Particle characteristics

Particle size:	Not applicable.	

- Explosive properties:

Vapours can form explosive mixtures with air and are able to flame up or explode in presence of an ignition source.

- Oxidizing properties:

Not classified as oxidizing product.

*Estimated values based on the substances composing the mixture.

9.2 OTHER INFORMATION:

Information regarding physical hazard classes

No additional information available.

Other security features:

VOC (supply):	9,7 % Weight	
VOC (supply):	110,0 g/l	
Nonvolatile:	90,35 * % Weight	1h. 60ºC

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.

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Code : 0068

Version: 4 **Revision: 16/05/2024** Previous revision: 01/06/2023 Date of printing: 16/05/2024

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 water, alkalis, amines, alcohols, oxidizing agents, acids.Exothermic reaction with amines and alcohols. Reacts with water under evolution of CO2.

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

- 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 water, alkalis, amines, alcohols, oxidizing agents, acids.Clean the application equipment with a compatible solvent.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS:

As consequence of thermal decomposition, hazardous products may be produced, including isocyanates.

SECTION 11: TOXICOLOGICAL INFORMATION

No experimental toxicological data on the preparation is available. The toxicological classification for these mixture has been carried out by using the conventional calculation method of the Regulation (EU) No. 1272/2008~2022/692 (CLP).

11.1 INFORMATION ON HAZARD CLASSES AS DEFINED IN REGULATION (EC) NO 1272/2008 :

ACUTE TOXICITY:

Dose and lethal concentrations for individual ingredients:	DL50 (OECD401) mg/kg bw Oral	DL50 (OECD402) mg/kg bw Cutaneous	CL50 (OECD403) mg/m3·4h Inhalation
HDI oligomers, isocyanurate	2500 Rat	> 2000 Rat	> 390 Rat
Ethyldiisopropylamine	317 Rat	> 2000 Rat	> 2630 Rat
n-butyl hydrogenphosphate	5300 Rat	> 2000 Rabbit	
Hexamethylene-1,6-diisocyanate	738 Rat	593 Rabbit	> 124 Rat

Estimates of acute toxicity (ATE) for individual ingredients:	ATE mg/kg bw Oral	ATE mg/kg bw Cutaneous	ATE mg/m3·4h Inhalation
HDI oligomers, isocyanurate	-	-	11000 Vapours
Ethyldiisopropylamine	317	-	2630 Vapours
Hexamethylene-1,6-diisocyanate	738	-	124 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
Inhalation:	ATE : 11.074 mg/m3	Cat.4	HARMFUL: Harmful if inhaled.	GHS/CLP 3.1.3.6.
Skin: Not classified	ATE > 2000 mg/kg bw	Not available.	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.
Eyes: Not classified	Not available.	-	Not classified as a product with acute toxicity by eye contact (lack of data).	GHS/CLP 1.2.5.

Ingestion: Not classified	ATE > 5000 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
- Respiratory corrosion/irritation:	Respiratory tract	Cat.3	IRRITANT: May cause respiratory irritation.	GHS/CLP 1.2.6. 3.8.3.4.
- Skin corrosion/irritation:	Skin	Cat.2	IRRITANT: Causes skin irritation.	GHS/CLP 3.2.3.3.
- Serious eye damage/irritation:	Eyes	Cat.1	DAMAGE: Causes serious eye damage.	GHS/CLP 3.3.3.3.
- Respiratory sensitisation: 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.
- Skin sensitisation:	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.

- ASPIRATION HAZARD:

Danger class	Target organs	Cat.	Main effects, acute and/or delayed	Criteria
- Aspiration hazard: 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
- Respiratory effects:	SE	Respiratory tract	Cat.3	IRRITANT: May cause respiratory irritation.	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

May be absorbed by inhalation of vapour, through the skin and by ingestion.

- Short-term exposure:

Exposure to solvent vapour concentrations in excess of the stated occupational exposure limit, may result in adverse health effects, such as mucous membrane and respiratory system irritation and adverse effects on kidneys, liver and central nervous system.Liquid splashes in the eyes may cause irritation and reversible damage.If swallowed, may cause irritation of the throat; other effects may be the same as described in the exposure to vapours. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.

- Long-term or repeated exposure:

Repeated or prolonged contact may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

INTERACTIVE EFFECTS:

Not available.

INFORMATION ABOUT TOXICOCINETICS, METABOLISM AND DISTRIBUTION:

- Dermal absorption:

Not available.

- Basic toxicokinetics:

Not available.

ADDITIONAL INFORMATION:

Based on the properties of the isocyanate content of this product and existing technical data of similar preparations,

11.2 INFORMATION ON OTHER HAZARDS:

Endocrine disrupting properties:

This product does not contain substances with endocrine disrupting properties identified or under evaluation.

Other information:

No additional information available.

SECTION 12: ECOLOGICAL INFORMATION

No experimental ecotoxicological data on the preparation as such is available. The ecotoxicological classification for these mixture has been carried out by using the conventional calculation method of the Regulation (EU) No. 1272/2008~2022/692 (CLP).

12.1 TOXICITY:

- Acute toxicity in aquatic environment for individual ingredients	CL50 (OECD 203) mg/l·96hours	CE50 (OECD 202) mg/l·48hours	CE50 (OECD 201) mg/l·72hours
HDI oligomers, isocyanurate	100 - Fishes	100 - Daphniae	1000 - Algae
Ethyldiisopropylamine	70 - Fishes	28 - Daphniae	150 - Algae
Tridecyl phosphate ethoxylated	10 - Fishes		
n-butyl hydrogenphosphate	154 - Fishes	123 - Daphniae	100 - Algae
Hexamethylene-1,6-diisocyanate			77 - Algae

- No observed effect concentration

Not available

- Lowest observed effect concentration

Not available

ASSESSMENT OF AQUATIC TOXICITY:

Aquatic toxicity	Cat.	Main hazards to the aquatic environment	Criteria
- Acute aquatic toxicity: 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.
- Chronic aquatic toxicity:	Cat.3	HARMFUL: Harmful 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:

- Biodegradability:

Not available.

Aerobic biodegradation for individual ingredients	COD mgO2/g	%DBO/DQO 5 days	14 days	28 days	Biodegradabilidad
HDI oligomers, isocyanurate		-	-	1	Not easy
Ethyldiisopropylamine		-	-	2	Not easy
Tridecyl phosphate ethoxylated		-	-	45	Not easy
n-butyl hydrogenphosphate		-	-	64	Easy
Hexamethylene-1,6-diisocyanate		-	20	42	Not easy

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

- Hydrolysis:

Not available.

- Photodegradability:

Not available.

12.3 BIOACCUMULATIVE POTENTIAL:

Not available.

Bioaccumulation for individual ingredients	logPow	BCF L/kg	Potential
HDI oligomers, isocyanurate	5.54	3.2 (calculated)	No bioaccumulable
Ethyldiisopropylamine	2.35	16.4 (calculated)	Low

	Tridecyl phosphate ethoxylated	3.81	151.1 (calculated)	High
	n-butyl hydrogenphosphate	2.29	32 (calculated)	Unlikely, low
	Hexamethylene-1,6-diisocyanate	3.2	59.6 (calculated)	Low

12.4 MOBILITY IN SOIL:

Not available

Mobility for individual ingredients	log Poc	Constant of Henry Pa·m3/mol 20ºC	Potential
Tridecyl phosphate ethoxylated	2,68		High
n-butyl hydrogenphosphate	2,6		Unlikely, low
Hexamethylene-1,6-diisocyanate	2,78	3,99 (calculated)	Low
HDI oligomers, isocyanurate		0 (calculated)	No bioaccumulable
Ethyldiisopropylamine	2,16		Low

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 ENDOCRINE DISRUPTING PROPERTIES:

This product does not contain substances with endocrine disrupting properties identified or under evaluation.

12.7 OTHER ADVERSE EFFECTS:

- Ozone depletion potential:

Not available.

- Photochemical ozone creation potential:

Not available.

- Earth global warming 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.

LER code	Description	Type of waste
		Hazardous

Type of waste according to Regulation (EU) No. 1357/2014:

HP 6 Acute toxicity
HP 4 Irritant — skin irritation and eye damage
HP 13 Sensitising
HP 5 Specific Target Organ Toxicity (STOT)/Aspiration toxicity
HP 14 Ecotoxic

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 empting 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:

Authorised landfill in accordance with local regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 UN NUMBER OR ID NUMBER:

Not applicable

14.2 UN PROPER SHIPPING NAME:

Not applicable

14.3 TRANSPORT HAZARD CLASS(ES):

Transport by road (ADR 2023) and
Transport by rail (RID 2023):

No reglamented

Transport by sea (IMDG 40-20):

No reglamented

Transport by air (ICAO/IATA 2021):

No reglamented

Transport by inland waterways (ADN):

No reglamented

14.4 PACKING GROUP:

No reglamented

14.5 ENVIRONMENTAL HAZARDS:

Not applicable.

14.6 SPECIAL PRECAUTIONS FOR USER:

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 MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS:

Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

The regulations applicable to this product generally are listed throughout this Safety Data Sheet.

Restrictions on manufacture, placing on market and use:

See section 1.2

Tactile warning of danger:

If the product is intended for the public in general, a tactile danger sign is mandatory.The technical specifications for tactile warning devices shall conform with EN ISO standard 11683 relating to 'Packaging - Tactile warnings of danger - Requirements.'

Child safety protection:

Not applicable (the classification criteria are not met).

OTHER REGULATIONS:

Not available.

Control of the risks inherent in major accidents (Seveso III):

See section 7.2

Other local legislations:

The receiver should verify the possible existence of local regulations applicable to the chemical.

15.2 CHEMICAL SAFETY ASSESSMENT:

A chemical safety assessment has not been carried out for this mixture.

SECTION 16 : OTHER INFORMATION

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

Hazard statements according the Regulation (EU) No. 1272/2008~2022/692 (CLP), Annex III:

H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. 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. H330 Fatal if inhaled. H331 Toxic if inhaled. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

Notes related to the identification, classification and labelling of the substances or mixtures:

Note 2 : The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.

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, 2021).
· European agreement on the international carriage of dangerous goods by road, (ADR 2023).
· International Maritime Dangerous Goods Code IMDG including Amendment 40-20 (IMO, 2020).

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 regularion on Classificatin, Labelling amd 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.
· VOC: Volatile Organic Compounds.
· DNEL: Derived No-Effect Level (REACH).
· PNEC: Predicted No-Effect Concentration (REACH).
· LC50: Lethal concentration, 50 percent.
· LD50: Lethal dose, 50 percent.
· UN: United Nations Organisation.
· ADR: European agreement concerning the international carriage of dangeous goods by road.
· RID: Regulations concerning the international transport of dangeous goods by rail.
· IMDG: International Maritime code for Dangerous Goods.
· IATA: International Air Transport Association.
· ICAO: International Civil Aviation Organization.

ENDURECEDOR ESMALTE 2KR ACQUA

Code : 0068

Version: 4 **Revision: 16/05/2024** Previous revision: 01/06/2023 Date of printing: 16/05/2024

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. 2020/878.

HISTORIC:	REVISION:
Version: 1	26/12/2019
Version: 2	27/01/2023
Version: 3	01/06/2023
Version: 4	16/05/2024

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 #.

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 conditionsare 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.