NEUCE O FUTURO DA TINTA

Endurecedor Neucetop PA 141
Code: 50268000

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

1.1 PRODUCT IDENTIFIER: Endurecedor Neucetop PA 141
Code: 50268000

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:
Intended uses (main technical functions): [X] Industrial [_] Professional [_] Consumers
 # Hardener.
 # Sectors of use:
 # Industrial manufacturing (SU3).
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 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.

 # Classification in accordance with Regulation (EU) No. 1272/2008~2018/1480 (CLP):
WARNING: Flam. Liq. 3:H226 | Skin Irrit. 2:H315 | Eye Irrit. 2:H319 | Skin Sens. 1:H317 | STOT SE (irrit.) 3:H335 | STOT SE (narcosis) 3:H336 | STOT RE 2:H373i | EUH066

Danger class	Classification of the mixture		Cat.	Routes of exposure	Target organs	Effects
Physicochemical: 	Flam. Liq. 3:H226	c)	Cat.3	-	-	-
Human health: 	Skin Irrit. 2:H315	c)	Cat.2	Skin	Skin	Irritation
	Eye Irrit. 2:H319	c)	Cat.2	Eyes	Eyes	Irritation
	Skin Sens. 1:H317	c)	Cat.1	Skin	Skin	Allergy
	STOT SE (irrit.) 3:H335	c)	Cat.3	Inhalation	Respiratory tract	Irritation
	STOT SE (narcosis) 3:H336	c)	Cat.3	Inhalation	CNS	Narcosis
	STOT RE 2:H373i	c)	Cat.2	Inhalation	Systemic	Damage
Environment: Not classified	EUH066	c)	-	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 WARNING in accordance with Regulation (EU) No. 1272/2008~2018/1480 (CLP)

Hazard statements:

H226	Flammable liquid and vapour.
H373i	May cause damage to organs through prolonged or repeated exposure if inhaled.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H317	May cause an allergic skin reaction.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take action to prevent static discharges.
P370+P378	In case of fire: Use water spray, alcohol-resistant foam, dry chemical powder, carbon dioxide, AFFF to extinguish.
P280F	Wear protective gloves, clothing and eye protection. In case of inadequate ventilation wear respiratory protection.
P363	Wash contaminated clothing before reuse.

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.
P501c	Dispose of contents/container as hazardous waste.

Supplementary statements:
EUH204 Contains isocyanates. May produce an allergic reaction.
Substances that contribute to classification:
Hexamethylene diisocyanate, oligomers
Xylene (mixture of isomers)
n-butyl acetate
Ethylbenzene

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: *# People with hypersensitive respiratory tract (by instance, asthma or chronical bronchitis) should not handle this product. The symptoms in the respiratory tract may appear even last few hours of excessive exposure. The major dangers for respiratory ways are the dust, vapours or aerosols.*
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 hexamethylene diisocyanate, oligomers.

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

30 < 40 % 	Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 , EC: 500-060-2 CLP: Warning: Skin Sens. 1:H317	REACH: Exempt	Autoclassified
25 < 30 % 	Xylene (mixture of isomers) CAS: 1330-20-7 , EC: 215-535-7 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	REACH: 01-2119488216-32	Index No. 601-022-00-9 < REACH
25 < 30 % 	n-butyl acetate CAS: 123-86-4 , EC: 204-658-1 CLP: Warning: Flam. Liq. 3:H226 | STOT SE (narcosis) 3:H336 | EUH066	REACH: 01-2119485493-29	Index No. 607-025-00-1 < REACH / ATP01
5 < 10 % 	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
5 < 10 % 	2-methoxy-1-methylethyl acetate CAS: 108-65-6 , EC: 203-603-9 CLP: Warning: Flam. Liq. 3:H226 | STOT SE (narcosis) 3:H336	REACH: 01-2119475791-29	Index No. 607-195-00-7 < REACH

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 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.

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.*	*# 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 and pain.*	*# 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 immediate medical attention. 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:
 # In case of fire, use water spray, alcohol-resistant foam, dry chemical powder, carbon dioxide, AFFF.

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, isocyanate vapours, traces of hydrocyanic acid. 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..). 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:

 # 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	:	#	27*	# ºC
- Upper/lower flammability or explosive limits	:	#	1.3* - 7.6	% Volume 25ºC
- Upper/lower flammability or explosive limits	:	#	0.9* - 10.4	% Volume 300ºC

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:

 # It is not considered a danger to the environment. 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. 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 storage	:	# According to current legislation.
Maximum storage period	:	# 12. months
Temperature interval	:	# min: 5. ºC, max: 35. ºC (recommended).

Incompatible materials:

 # Keep away from water, oxidizing agents, acids, alkalis, amines, alcohols, peroxides. Clean the application equipment with a compatible solvent. Never leave the equipment filled with the cleaning solvent for prolonged periods, especially when used for cleaning solvents recovered which may contain moisture or alcohols, to prevent the product from hardening in the equipment, causing seals on the hoses or guns.

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: Flammable liquid and vapour (P5c) (5000t/50000t).
· Health hazards: Not applicable
· Environmental hazards: Not applicable
· Other hazards: Not applicable.
- Threshold quantity for the application of lower-tier requirements: 5000 tons
- Threshold quantity for the application of upper-tier requirements: 50000 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.

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 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 (TLV)

AGCIH 2018	Year	TLV-TWA ppm	TLV-TWA mg/m3	TLV-STEL ppm	TLV-STEL mg/m3	Remarks
Xylene	1996	100.	434.	150.	651.	A4 , BEI
n-butyl acetate	2015	50.	237.	150.	713.	
Ethylbenzene	2002	100.	434.	125.	543.	A3 , BEI
2-methoxy-1-methylethyl acetate		50.	275.	100.	550.	Recommended Skin

TLV - Threshold Limit Value, TWA - Time Weighted Average, STEL - Short Term Exposure Limit.
Skin - Danger of cutaneous absorption.
A3 - Carcinogenic in animals.
A4 - Non classified as carcinogenic in humans.
BEI - Biological exposure index (biological monitoring).

Dermal (Vd): *# Means that, in exposures to this substance, the contribution by the cutaneous route, including the mucous membranes and eyes, may result significant for the overall body content if no measures are taken to prevent absorption. There are some chemicals for which dermal absorption, both in liquid and vapour phases, can be very high, and this route of entry may be or equal or greater importance even that inhalation pathway. In these situations, the use of a biological control is essential in order to quantify the overall amount of contaminant absorbed.*

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).*
- *# 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:	DNEL Inhalation mg/m3		DNEL Cutaneous mg/kg bw/d		DNEL Oral mg/kg bw/d	
Xylene (mixture of isomers)	289. (a)	77.0 (c)	s/r (a)	180. (c)	- (a)	- (c)
n-butyl acetate	960. (a)	480. (c)	11.0 (a)	11.0 (c)	- (a)	- (c)
2-methoxy-1-methylethyl acetate	- (a)	275. (c)	- (a)	154. (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	
Xylene (mixture of isomers)	289. (a)	s/r (c)	s/r (a)	s/r (c)	- (a)	- (c)
n-butyl acetate	960. (a)	480. (c)	s/r (a)	s/r (c)	s/r (a)	- (c)
2-methoxy-1-methylethyl acetate	- (a)	- (c)	- (a)	- (c)	- (a)	- (c)

Derived no-effect level, general population:
Not applicable (product for 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).

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
Xylene (mixture of isomers)	0.327	0.327	0.327
n-butyl acetate	0.180	0.0180	0.360
2-methoxy-1-methylethyl acetate	0.635	0.0635	6.35
- 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
Xylene (mixture of isomers)	6.58	12.5	12.5
n-butyl acetate	35.6	0.981	0.0981
2-methoxy-1-methylethyl acetate	100.	3.29	0.329
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
Xylene (mixture of isomers)	-	2.31	-
n-butyl acetate	s/r	0.0903	n/b
2-methoxy-1-methylethyl acetate	-	0.290	-

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

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: *# It is recommended to install emergency eye baths close to the working area.*
Protection of hands and skin: *# It is recommended to install emergency showers 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:  ✓	*# 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, compressed air-fed respiratory protective equipment (EN137) is required. For short periods of work, you can consider the utilisation of a combination mask with gas and particle filters, type A2-P2 (EN14387/EN143).*
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:	*# It is advisable personnel wear antistatic clothing made of natural fibre or high temperature resistant synthetic fibre.*

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.*

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	:	# *Not applicable (non-aqueous media).*		
Change of state				
- Melting point	:	# *Not applicable (mixture).*		
- Initial boiling point	:	# *126.3**	# *ºC at 760 mmHg*	
Density				
- Vapour density	:	# *3.85**	at 20ºC 1 atm.	Relative air
- Relative density	:	# *1. ± 0.1*	# *at 20/4ºC*	Relative water
Stability				
- Decomposition temperature	:	# *Not available (technical impossibility to obtain the data).*		
Viscosity:				
- Kinematic viscosity	:	# *Not applicable*		
Volatility:				
- Evaporation rate	:	# *85**	nBuAc=100 25ºC	Relative
- Vapour pressure	:	# *7.4**	# *mmHg at 20ºC*	
- Vapour pressure	:	# *4.9**	kPa at 50ºC	
Solubility(ies)				
- Solubility in water	:	# *Not applicable*		
- Liposolubility	:	# *Not available (mixture untested).*		
- Partition coefficient: n-octanol/water	:	# *Not applicable (mixture).*		
Flammability:				
- Flash point	:	# *27**	ºC	# *CLP*
- Upper/lower flammability or explosive limits	:	# *1.3* - 7.6*	% Volume 25ºC	
- Upper/lower flammability or explosive limits	:	# *0.9* - 10.4*	% Volume 300ºC	
- Autoignition temperature	:	# *Not available*		

Explosive properties:
 # Not available.
Oxidizing properties:
 # Not classified as oxidizing product.

*Estimated values based on the substances composing the mixture.

9.2 OTHER INFORMATION:

- Heat of combustion	:	# *7033**	Kcal/kg	
- Solids	:	# *34.5*	# *% 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 water, oxidizing agents, acids, alkalis, amines, alcohols, peroxides. 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. 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.*
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, oxidizing agents, acids, alkalis, amines, alcohols, peroxides. Clean the application equipment with a compatible solvent. Never leave the equipment filled with the cleaning solvent for prolonged periods, especially when used for cleaning solvents recovered which may contain moisture or alcohols, to prevent the product from hardening in the equipment, causing seals on the hoses or guns.

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. 1272/2008~2018/1480 (CLP).

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

ACUTE TOXICITY:

Dose and lethal concentrations for individual ingredients :	LD50 (OECD 401) mg/kg bw oral	LD50 (OECD 402) mg/kg bw cutaneous	LC50 (OECD 403) mg/m3·4h inhalation
Hexamethylene diisocyanate, oligomers	> 5000. Rat	> 5000. Rabbit	> 390. Rat
Xylene (mixture of isomers)	4300. Rat	1700. Rabbit	> 22080. Rat
n-butyl acetate	10768. Rat	17600. Rabbit	> 23400. Rat
Ethylbenzene	3500. Rat	15400. Rabbit	> 17400. Rat
2-methoxy-1-methylethyl acetate	8532. Rat	> 5000. Rat	> 35700. Rat

Estimates of acute toxicity (ATE) for individual ingredients :	ATE mg/kg bw oral	ATE mg/kg bw cutaneous	ATE mg/m3·4h inhalation
Xylene (mixture of isomers)	-	1100.*	11000.* Vapours
Ethylbenzene	-	-	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
Inhalation: 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.
Skin: 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.
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 > 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
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.2	*# IRRITANT: Causes serious eye irritation.*	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
Systemic:	RE	Systemic	Cat.2	*# HARMFUL: May cause damage to organs through prolonged or repeated exposure if inhaled.*	GHS/CLP 3.8.3.4.
Respiratory:	SE	Respiratory tract	Cat.3	*# IRRITANT: May cause respiratory irritation.*	GHS/CLP 3.8.3.4.
Cutaneous:	RE	Skin	-	*# DEFATTENING: Repeated exposure may cause skin dryness or cracking.*	GHS/CLP 1.2.4.
Neurological:	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 TOXICOCINETICS, METABOLISM AND DISTRIBUTION:
Dermal absorption:
This preparation contains the following substances for which dermal absorption can be very high: 2-methoxy-1-methylethyl acetate
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 these 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 :	LC50 (OECD 203) mg/l·96hours	EC50 (OECD 202) mg/l·48hours	EC50 (OECD 201) mg/l·72hours
Hexamethylene diisocyanate, oligomers			> 1000. Algae
Xylene (mixture of isomers)	> 14. Fishes	> 16. Daphnia	> 10. Algae
n-butyl acetate	> 18. Fishes	> 44. Daphnia	675. Algae
Ethylbenzene	> 12. Fishes	> 1.8 Daphnia	> 33. Algae
2-methoxy-1-methylethyl acetate	134. Fishes	408. Daphnia	> 1000. Algae
No observed effect concentration	NOEC (OECD 210) mg/l·28days	NOEC (OECD 211) mg/l·21days	NOEC (OECD 201) mg/l·72hours
n-butyl acetate		23. Daphnia	
2-methoxy-1-methylethyl acetate		> 100. Daphnia	

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: Not classified	-	*# Not classified as a dangerous product with chronic toxicity to aquatic life with long lasting effects (based on available data, the classification criteria are not met).*	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.

Aerobic biodegradation for individual ingredients :	DQO mgO2/g	%DBO/DQO 5 days 14 days 28 days	Biodegradability
Hexamethylene diisocyanate, oligomers			Not easy
Xylene (mixture of isomers)	2620.	~ 52. ~ 81. ~ 88.	Easy
n-butyl acetate	2204.	~ 80. ~ 82. ~ 83.	Easy
Ethylbenzene	3164.	~ 30. ~ 68. ~ 79.	Easy
2-methoxy-1-methylethyl acetate	1520.	~ 22. ~ 78. ~ 90.	Easy

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

12.3 BIOACCUMULATIVE POTENTIAL:
 # Not available.

Bioaccumulation for individual ingredients :	log Pow	BCF L/kg	Potential
Hexamethylene diisocyanate, oligomers			Not available
Xylene (mixture of isomers)	3.16	57. (calculated)	Not available
n-butyl acetate	1.81	6.9 (calculated)	Not available
Ethylbenzene	3.15	56. (calculated)	Not available
2-methoxy-1-methylethyl acetate	0.560	3.2 (calculated)	Not available

12.4 MOBILITY IN SOIL:
 # Not available.

Mobility for individual ingredients :	log Koc	Constant of Henry Pa·m3/mol 20ºC	Potential
Hexamethylene diisocyanate, oligomers			Not available
Xylene (mixture of isomers)	2.25	660. (calculated)	Not available
n-butyl acetate	1.84	29. (calculated)	Not available
Ethylbenzene	2.23	798. (calculated)	Not available
2-methoxy-1-methylethyl acetate	0.230	0.42 (calculated)	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 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:
 # Controlled incineration in special facilities for chemical waste, in accordance with local regulations.

SECTION 14 : TRANSPORT INFORMATION

14.1 UN NUMBER: 1263

14.2 UN PROPER SHIPPING NAME:
PAINT

14.3 TRANSPORT HAZARD CLASS(ES):

Transport by road (ADR 2019) and
Transport by rail (RID 2019):

- Class:	3
- Packing group:	III
- Classification code:	F1
- Tunnel restriction code:	(D/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

Transport by sea (IMDG 38-16):

- Class:	3
- Packing group:	III
- Emergency Sheet (EmS):	F-E,S_E
- First Aid Guide (MFAG):	310,313
- Marine pollutant:	No.
- Transport document:	Shipping Bill of lading.

Transport by air (ICAO/IATA 2018):

- Class:	3
- Packing group:	III
- Transport document:	Air Bill of lading.

Transport by inland waterways (ADN):
 # Not available.

14.4 PACKING GROUP:
See section 14.3

14.5 ENVIRONMENTAL HAZARDS:
 # Not applicable (not classified as hazardous for the environment).

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 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE
 # Not applicable.

SECTION 15 : REGULATORY INFORMATION

15.1 EU SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC:
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: Not applicable (product for industrial use).

Child safety protection: Not applicable (the classification criteria are not met).

OTHER REGULATIONS:

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

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. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. 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. H373iE May cause damage to hearing organs through prolonged or repeated exposure if inhaled.

Indications for preparations containing isocyanates:
Ready-to-use preparations containing isocyanates may have an irritant effect on mucous membranes -especially on breathing organs- and cause hypersensitivity reactions. Inhalation of vapour or spray mist may cause sensitisation. When handling preparations containing isocyanates all precautions required for solvent-containing preparations must be followed. Vapour and spray mist in particular should not be inhaled. Allergics and asthmatics, as well as people prone to respiratory ailments should not work with isocyanate-containing preparations.

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).
· Riesgos y Patologia por Isocianatos, G.Alomar (INSHT, DT54.89, 1989).
· ISOPA directives for the safety in the load/unload, transport and storage of TDI and MDI. ISOPA publication number: PSC-0014-GUIDL-EN.
· 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 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.
 # · 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 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.

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:	Revision:
Version: 2	06/02/2019
Version: 3	25/09/2019

 # 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 (#).