BEKAMENT
Snaga je u našim rukama

BK-ParketFix PU Prime

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

1.1 Product identifier: BK-ParketFix PU Prime

Other means of identification:

UFI: 0940-X00M-H002-W1UH

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

Relevant uses: Primers. For professional users only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Banja Komerc Bekament d.o.o.
EIpprova 11
1000 Ljubljana - Slovenia - Slovenia
e-mail: laboratorija@bekament.com
http://bekament.com

1.4 Emergency telephone number: 911

SECTION 2: HAZARDS IDENTIFICATION **

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 4: Acute inhalation toxicity, Category 4, H332
Carc. 2: Carcinogenicity, Category 2, H351
Eye Irrit. 2: Eye irritation, Category 2, H319
Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1: Sensitisation, skin, Category 1, H317
STOT RE 2: Specific target organ toxicity — Repeated exposure, Hazard Category 2 (Inhalation), H373
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Danger

Hazard statements:

H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure (Inhalation).

Precautionary statements:

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 2: HAZARDS IDENTIFICATION ** (continued)

P201: Obtain special instructions before use.
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
P302+P352: IF ON SKIN: Wash with plenty of water.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

Supplementary information:

EUH204: Contains isocyanates. May produce an allergic reaction.

Substances that contribute to the classification

Ethyl acetate; Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.-hydro-.omega.-hydroxypoly(oxy(methyl-1,2-ethanediyl)]; 4,4´-methylenediphenyl diisocyanate, isomers and homologues; 4,4´-methylenediphenyl diisocyanate

Additional Labelling:

As from 24 August 2023 adequate training is required before industrial or professional use.

Additional labeling:

Contains diphenylmethane-4,4'-diisocyanate, MDI-based polyisocyanate prepolymer, diphenylmethane-2,4'-diisocyanate, 2,2'-methylenediphenyl diisocyanate, diphenylmethane diisocyanate, isomers and homologues.

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

*** Changes with regards to the previous version*

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS **

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Aqueous mixture composed of polyurethane

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 141-78-6 EC: 205-500-4 Index: 607-022-00-5 REACH: 01-2119475103-46-XXXX	**Ethyl acetate[1]**	ATP CLP00	**20 - <100 %**
	Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger 	
CAS: 53862-89-8 EC: Non-applicable Index: Non-applicable REACH: Non-applicable	**Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.-hydro-.omega.-hydroxypoly(oxy(methyl-1,2-ethanediyl)][1]**	Self-classified	**20 - <100 %**
	Regulation 1272/2008	Acute Tox. 4: H332; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger 	
CAS: 9016-87-9 EC: 618-498-9 Index: Non-applicable REACH: Non-applicable	**4,4´-methylenediphenyl diisocyanate, isomers and homologues[1]**	Self-classified	**1 - <20 %**
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger 	
CAS: 101-68-8 EC: 202-966-0 Index: 615-005-00-9 REACH: 01-2119457014-47-XXXX	**4,4´-methylenediphenyl diisocyanate[1]**	ATP CLP00	**1 - <20 %**
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger 	
CAS: Non-applicable EC: 905-806-4 Index: Non-applicable REACH: 01-2119457015-45-XXXX	**Reaction mass of 4,4´- methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate[1]**	Self-classified	**1 - <20 %**
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger	

[1] Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS ** (continued)

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

*** Changes with regards to the previous version*

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, manipulation and use, but the product contains flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- CONTINUED ON NEXT PAGE -

SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.:	5 ºC
Maximum Temp.:	25 ºC
Maximum time:	6 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

- CONTINUED ON NEXT PAGE -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Directive (EU) 2000/39, Directive 2004/37/EC,Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
Ethyl acetate	IOELV (8h)	200 ppm	734 mg/m³
CAS: 141-78-6 EC: 205-500-4	IOELV (STEL)	400 ppm	1468 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Ethyl acetate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 141-78-6	Dermal	Non-applicable	Non-applicable	63 mg/kg	Non-applicable
EC: 205-500-4	Inhalation	1468 mg/m³	1468 mg/m³	734 mg/m³	734 mg/m³
4,4´-methylenediphenyl diisocyanate, isomers and homologues	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 9016-87-9	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 618-498-9	Inhalation	Non-applicable	0,1 mg/m³	Non-applicable	0,05 mg/m³
4,4´-methylenediphenyl diisocyanate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 101-68-8	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 202-966-0	Inhalation	Non-applicable	0,1 mg/m³	Non-applicable	0,05 mg/m³
Reaction mass of 4,4´- methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: Non-applicable	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 905-806-4	Inhalation	Non-applicable	0,1 mg/m³	Non-applicable	0,05 mg/m³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Ethyl acetate	Oral	Non-applicable	Non-applicable	4,5 mg/kg	Non-applicable
CAS: 141-78-6	Dermal	Non-applicable	Non-applicable	37 mg/kg	Non-applicable
EC: 205-500-4	Inhalation	734 mg/m³	734 mg/m³	367 mg/m³	367 mg/m³
4,4´-methylenediphenyl diisocyanate, isomers and homologues	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 9016-87-9	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 618-498-9	Inhalation	Non-applicable	0,05 mg/m³	Non-applicable	0,025 mg/m³
4,4´-methylenediphenyl diisocyanate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 101-68-8	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 202-966-0	Inhalation	Non-applicable	0,05 mg/m³	Non-applicable	0,025 mg/m³
Reaction mass of 4,4´- methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: Non-applicable	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 905-806-4	Inhalation	Non-applicable	0,05 mg/m³	Non-applicable	0,025 mg/m³

PNEC:

Identification				
Ethyl acetate	STP	650 mg/L	Fresh water	0,24 mg/L
CAS: 141-78-6	Soil	0,148 mg/kg	Marine water	0,024 mg/L
EC: 205-500-4	Intermittent	1,65 mg/L	Sediment (Fresh water)	1,15 mg/kg
	Oral	0,2 g/kg	Sediment (Marine water)	0,115 mg/kg
4,4´-methylenediphenyl diisocyanate, isomers and homologues	STP	1 mg/L	Fresh water	1 mg/L
CAS: 9016-87-9	Soil	1 mg/kg	Marine water	0,1 mg/L
EC: 618-498-9	Intermittent	10 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
4,4´-methylenediphenyl diisocyanate	STP	1 mg/L	Fresh water	1 mg/L
CAS: 101-68-8	Soil	1 mg/kg	Marine water	0,1 mg/L
EC: 202-966-0	Intermittent	10 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable

- CONTINUED ON NEXT PAGE -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
Reaction mass of 4,4´- methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate	STP	1 mg/L	Fresh water	1 mg/L
CAS: Non-applicable	Soil	1 mg/kg	Marine water	0,1 mg/L
EC: 905-806-4	Intermittent	10 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable

8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 2016/425/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.
All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	CE CAT III	EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves	CE CAT III	EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN ISO 21420:2020	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield	CE CAT II	EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks	CE CAT III	EN 13034:2005+A1:2009 EN 168:2002 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN 464:1994	For professional use only. Clean periodically according to the manufacturer´s instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk	CE CAT III	EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

- CONTINUED ON NEXT PAGE -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	40 % weight
V.O.C. density at 20 ºC:	Non-applicable
Average carbon number:	4
Average molecular weight:	88,1 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 ºC:	Liquid
Appearance:	Not available
Colour:	Not available
Odour:	Not available
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 ºC:	Non-applicable *
Vapour pressure at 50 ºC:	37463,03 Pa (37,46 kPa)
Evaporation rate at 20 ºC:	Non-applicable *

Product description:

Density at 20 ºC:	Non-applicable *
Relative density at 20 ºC:	1,1 - 1,2
Dynamic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 40 ºC:	Non-applicable *
Concentration:	Non-applicable *
pH:	4 - 5
Vapour density at 20 ºC:	Non-applicable *
Partition coefficient n-octanol/water 20 ºC:	Non-applicable *
Solubility in water at 20 ºC:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

Flammability:

Flash Point:	Non Flammable (>60 ºC)
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

- CONTINUED ON NEXT PAGE -

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Particle characteristics:

Median equivalent diameter:	Non-applicable

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *

Other safety characteristics:

Surface tension at 20 ºC:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Precaution	Precaution	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO_2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION **

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 11: TOXICOLOGICAL INFORMATION ** (continued)

- Acute toxicity : Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
  IARC: 4,4´-methylenediphenyl diisocyanate, isomers and homologues (3); 4,4´-methylenediphenyl diisocyanate (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Prolonged exposure can result in specific respiratory hypersensitivity.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Skin: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
4,4´-methylenediphenyl diisocyanate	LD50 oral	7616 mg/kg	Rat
CAS: 101-68-8	LD50 dermal	10000 mg/kg	Rabbit
EC: 202-966-0	LC50 inhalation	11 mg/L (ATEi)	
Ethyl acetate	LD50 oral	4100 mg/kg	Rat
CAS: 141-78-6	LD50 dermal	20000 mg/kg	Rabbit
EC: 205-500-4	LC50 inhalation	Non-applicable	
Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.-hydro-.omega.-hydroxypoly(oxy(methyl-1,2-ethanediyl)]	LD50 oral	Non-applicable	
CAS: 53862-89-8	LD50 dermal	Non-applicable	
EC: Non-applicable	LC50 inhalation	11 mg/L (ATEi)	
4,4´-methylenediphenyl diisocyanate, isomers and homologues	LD50 oral	Non-applicable	
CAS: 9016-87-9	LD50 dermal	Non-applicable	
EC: 618-498-9	LC50 inhalation	11 mg/L (ATEi)	
Reaction mass of 4,4´- methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate	LD50 oral	Non-applicable	
CAS: Non-applicable	LD50 dermal	Non-applicable	
EC: 905-806-4	LC50 inhalation	11 mg/L (ATEi)	

*** Changes with regards to the previous version*

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 12: ECOLOGICAL INFORMATION **

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
Ethyl acetate	LC50	230 mg/L (96 h)	Pimephales promelas	Fish
CAS: 141-78-6	EC50	717 mg/L (48 h)	Daphnia magna	Crustacean
EC: 205-500-4	EC50	3300 mg/L (48 h)	Scenedesmus subspicatus	Algae
4,4´-methylenediphenyl diisocyanate	LC50	1000 mg/L (96 h)	Brachydanio rerio	Fish
CAS: 101-68-8	EC50	Non-applicable		
EC: 202-966-0	EC50	Non-applicable		

Chronic toxicity:

Identification	Concentration		Species	Genus
Ethyl acetate	NOEC	9,65 mg/L	Pimephales promelas	Fish
CAS: 141-78-6 EC: 205-500-4	NOEC	2,4 mg/L	Daphnia magna	Crustacean
4,4´-methylenediphenyl diisocyanate	NOEC	Non-applicable		
CAS: 101-68-8 EC: 202-966-0	NOEC	10 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
Ethyl acetate	BOD5	1,36 g O2/g	Concentration	100 mg/L
CAS: 141-78-6	COD	1,69 g O2/g	Period	14 days
EC: 205-500-4	BOD5/COD	0,8	% Biodegradable	83 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
Ethyl acetate	BCF	30
CAS: 141-78-6	Pow Log	0.73
EC: 205-500-4	Potential	Moderate
4,4´-methylenediphenyl diisocyanate	BCF	150
CAS: 101-68-8	Pow Log	4.51
EC: 202-966-0	Potential	High

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Ethyl acetate	Koc	59	Henry	13,58 Pa·m³/mol
CAS: 141-78-6	Conclusion	Very High	Dry soil	Yes
EC: 205-500-4	Surface tension	2,324E-2 N/m (25 ºC)	Moist soil	Yes
4,4´-methylenediphenyl diisocyanate	Koc	Non-applicable	Henry	Non-applicable
CAS: 101-68-8	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 202-966-0	Surface tension	2,068E-2 N/m (283,45 ºC)	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

*** Changes with regards to the previous version*

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
04 02 14*	wastes from finishing containing organic solvents	Dangerous

- CONTINUED ON NEXT PAGE -

SECTION 13: DISPOSAL CONSIDERATIONS (continued)

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

HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP7 Carcinogenic, HP13 Sensitising, HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION **

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:

14.1	**UN number:**	UN1173
14.2	**UN proper shipping name:**	ETHYL ACETATE
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	II
14.5	**Environmental hazards:**	No
14.6	**Special precautions for user**	
	Special regulations:	Non-applicable
	Tunnel restriction code:	D/E
	Physico-Chemical properties:	see section 9
	Limited quantities:	1 L
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code:**	Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:

14.1	**UN number:**	UN1173
14.2	**UN proper shipping name:**	ETHYL ACETATE
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	II
14.5	**Marine pollutant:**	No
14.6	**Special precautions for user**	
	Special regulations:	Non-applicable
	EmS Codes:	F-E, S-D
	Physico-Chemical properties:	see section 9
	Limited quantities:	1 L
	Segregation group:	Non-applicable
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code:**	Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 14: TRANSPORT INFORMATION ** (continued)

14.1	**UN number:**	UN1173
14.2	**UN proper shipping name:**	ETHYL ACETATE
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	II
14.5	**Environmental hazards:**	No
14.6	**Special precautions for user**	
	Physico-Chemical properties:	see section 9
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code:**	Non-applicable

*** Changes with regards to the previous version*

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):

- CONTINUED ON NEXT PAGE -

SECTION 15: REGULATORY INFORMATION (continued)

Contains more than 0.1 % of 4,4´-methylenediphenyl diisocyanate, isomers and homologues, 4,4´-methylenediphenyl diisocyanate, Reaction mass of 4,4´- methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate by weight. 1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:
(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).
2. 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 requirements 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".
3. For the purpose of this entry "industrial and professional user(s)" means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.
4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:
(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).
(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:
— handling open mixtures at ambient temperature (including foam tunnels)
— spraying in a ventilated booth
— application by roller
— application by brush
— application by dipping and pouring
— mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore
— cleaning and waste
— any other uses with similar exposure through the dermal and/or inhalation route
(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:
— handling incompletely cured articles (e.g. freshly cured, still warm)
— foundry applications
— maintenance and repair that needs access to equipment
— open handling of warm or hot formulations (> 45 °C)
— spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers)
— and any other uses with similar exposure through the dermal and/or
inhalation route.
5. Training elements:
(a) general training, including on-line training, on:
— chemistry of diisocyanates
— toxicity hazards (including acute toxicity)
— exposure to diisocyanates
— occupational exposure limit values
— how sensitisation can develop
— odour as indication of hazard
— importance of volatility for risk
— viscosity, temperature, and molecular weight of diisocyanates
— personal hygiene
— personal protective equipment needed, including practical instructions for its correct use and its limitations
— risk of dermal contact and inhalation exposure
— risk in relation to application process used
— skin and inhalation protection scheme
— ventilation
— cleaning, leakages, maintenance
— discarding empty packaging
— protection of bystanders
— identification of critical handling stages
— specific national code systems (if applicable)
— behaviour-based safety
— certification or documented proof that training has been successfully completed
(b) intermediate level training, including on-line training, on:
— additional behaviour-based aspects
— maintenance

- CONTINUED ON NEXT PAGE -

SECTION 15: REGULATORY INFORMATION (continued)

— management of change
— evaluation of existing safety instructions
— risk in relation to application process used
— certification or documented proof that training has been successfully completed
(c) advanced training, including on-line training, on:
— any additional certification needed for the specific uses covered
— spraying outside a spraying booth
— open handling of hot or warm formulations (> 45 °C)
— certification or documented proof that training has been successfully completed
6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture (s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.
7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.
8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.
9. Member States shall include in their reports pursuant to Article 117(1) the following information:
(a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law
(b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates
(c) national exposure limits for diisocyanates, if there are any
(d) information about enforcement activities related to this restriction.
10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.
Contains more than 0.1 % of 4,4´-methylenediphenyl diisocyanate, 4,4´-methylenediphenyl diisocyanate, isomers and homologues by weight. This product may not be distributed in its present form for first-time sale to the general public after 27th December 2010 unless the packaging contains protective gloves meeting the provisions of Regulation (EU) 2016/425.
Shall not be used in:
—ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
—tricks and jokes,
—games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION **

Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 16: OTHER INFORMATION ** (continued)

COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3, SECTION 11, SECTION 12):
· New declared substances
Ethyl acetate (141-78-6)
Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha.-hydro-.omega.-hydroxypoly(oxy(methyl-1,2-ethanediyl)] (53862-89-8)
4,4´-methylenediphenyl diisocyanate, isomers and homologues (9016-87-9)
4,4´-methylenediphenyl diisocyanate (101-68-8)
Reaction mass of 4,4´- methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate
CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):
· Pictograms
· Hazard statements
· Precautionary statements
· Supplementary information
TRANSPORT INFORMATION (SECTION 14):
· UN number
· Packing group

Texts of the legislative phrases mentioned in section 2:

H315: Causes skin irritation.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317: May cause an allergic skin reaction.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.
H373: May cause damage to organs through prolonged or repeated exposure (Inhalation).
H351: Suspected of causing cancer.
H373: May cause damage to organs through prolonged or repeated exposure.
H332: Harmful if inhaled.
H319: Causes serious eye irritation.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Acute Tox. 4: H332 - Harmful if inhaled.
Carc. 2: H351 - Suspected of causing cancer.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Inhalation).
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.
STOT SE 3: H335 - May cause respiratory irritation.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

Skin Irrit. 2: Calculation method
Resp. Sens. 1: Calculation method
Skin Sens. 1: Calculation method
STOT SE 3: Calculation method
STOT SE 3: Calculation method
STOT RE 2: Calculation method
Carc. 2: Calculation method
STOT RE 2: Calculation method
Acute Tox. 4: Calculation method
Eye Irrit. 2: Calculation method

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

http://echa.europa.eu
http://eur-lex.europa.eu

Abbreviations and acronyms:

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 16: OTHER INFORMATION ** (continued)

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

*** Changes with regards to the previous version*

- END OF SAFETY DATA SHEET -