### **SAFETY DATA SHEET**

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830



## **MEGAPLAST PU 90S prepolymer**

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name Registration number REACH Product type REACH : MEGAPLAST PU 90S prepolymer

: Not applicable (mixture) : Mixture

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

1.2.1 Relevant identified uses

Adhesive

1.2.2 Uses advised against

No uses advised against known

#### 1.3. Details of the supplier of the safety data sheet

#### Supplier of the safety data sheet

Novatio\* Industrielaan 5B B-2250 Olen **2** +32 14 25 76 40 **4** +32 14 22 02 66 info@novatio.be \*NOVATIO is a registered trademark of Novatech International N.V.

#### Manufacturer of the product

#### 1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) : +32 14 58 45 45 (BIG)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Carc.	category 2	H351: Suspected of causing cancer.
Resp. Sens.	category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens.	category 1	H317: May cause an allergic skin reaction.
Acute Tox.	category 4	H332: Harmful if inhaled.
STOT RE	category 2	H373: May cause damage to organs (respiratory system) through prolonged or repeated exposure if inhaled.
Skin Irrit.	category 2	H315: Causes skin irritation.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H335: May cause respiratory irritation.

#### 2.2. Label elements



Contains: polymethylene polyphenyl isocyanate; 4,4'-methylenediphenyl diisocyanate, oligomers; isocyanic acid, polymethylenepolyphenylene ester, polymer with alpha-hydro-omega-hydroxypoly[oxy(methyl-1,2-ethanediyl)]; 4,4'-methylenediphenyl diisocyanate; 4,4'-methylenediphenyl diisocyanate, oligomeric reaction products with alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl); reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate; isocyanic acid, polymethylenpolyphenylene ester, polymer with alpha, alpha, alpha-1,2,3-propanetriyltris[omega-hydroxypoly[oxy(methyl-1,2-ethanediyl)]]; 4,4'-methylenediphenyl diisocyanate, oligomeric reaction products with glycerol, propoxylated.

Signal word Danger H-statements	
Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)	Publication date: 2006-02-01
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Reason for revision: 3.2	
Revision number: 0303	Product number: 35068

134-16239-647-en

H351	Suspected of causing cancer.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H373	May cause damage to organs (respiratory system) through prolonged or repeated exposure if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
P-statements	
P280	Wear protective gloves, protective clothing and eye protection/face protection.
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/doctor.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

#### 2.3. Other hazards

No other hazards known

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
polymethylene polyphenyl isocyanate	9016-87-9	15%≤C<20%	Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(1)(2)(8)(10)(V)	Constituent
4,4'-methylenediphenyl diisocyanate, oligomers 01-2119457013-49	25686-28-6 500-040-3	10%≤C<15%	Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(10)	Constituent
isocyanic acid, polymethylenepolyphenylene ester, polymer with alpha-hydro-omega-hydroxypoly[oxy (methyl-1,2-ethanediyl)]	53862-89-8	10%≤C<15%	Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(1)(10)	Constituent
4,4 <sup>1</sup> -methylenediphenyl diisocyanate 01-2119457014-47	101-68-8 202-966-0	10%≤C<15%	Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(1)(2)(8)(10)	Constituent
4,4'-methylenediphenyl diisocyanate, oligomeric reaction products with alpha-hydro-omega- hydroxypoly(oxy-1,2-ethanediyl)	9048-57-1 500-028-8	5%≤C<10%	Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3: H335	(1)	Constituent

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reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate 01-2119457015-45		5%≤C<10%	Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(1)(10)	Constituent			
isocyanic acid, polymethylenpolyphenylene ester, polymer with alpha, alpha, alpha-1,2,3- propanetriyltris[omega-hydroxypoly[oxy(methyl- 1,2-ethanediyl)]]	57029-46-6	3%≤C<5%	Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(1)(8)	Constituent			
4,4 <sup>-</sup> methylenediphenyl diisocyanate, oligomeric reaction products with glycerol, propoxylated	52409-10-6 500-115-0	1%≤C<2.5%	Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(1)	Constituent			
Talc (Mg3H2(SiO3)4)	14807-96-6 238-877-9	5%≤C<10%		(2)	Constituent			

(1) For H-statements in full: see heading 16

(2) Substance with a Community workplace exposure limit

(8) Specific concentration limits, see heading 16

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

(V) Exempted from registration under REACH (Regulation (EC) No 1907/2006, article 2 (9), polymers)

### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

#### General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

#### After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

#### After skin contact:

Wash immediately with lots of water. Do not apply (chemical) neutralizing agents without medical advice. Take victim to a doctor if irritation persists. After eve contact:

#### Anter eye contact.

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists.

### After ingestion:

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not apply (chemical) neutralizing agents without medical advice. Consult a doctor/medical service if you feel unwell.

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

#### 4.2.1 Acute symptoms After inhalation:

Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Headache. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of lung oedema.

- After skin contact:
- Tingling/irritation of the skin.
- After eye contact: Irritation of the eye tissue.
- After ingestion:

Irritation of the gastric/intestinal mucosa. Nausea. Vomiting. Diarrhoea.

4.2.2 Delayed symptoms

No effects known.

#### 4.3. Indication of any immediate medical attention and special treatment needed

If applicable and available it will be listed below.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

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Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.

Major fire: Class B foam (not alcohol-resistant).

5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.

Major fire: Water; risk of puddle expansion.

#### 5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide). On heating: release of toxic/combustible gases/vapours (hydrogen cyanide, isocyanates). Decomposes on exposure to water (moisture).

#### 5.3. Advice for firefighters

#### 5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

#### 5.3.2 Special protective equipment for fire-fighters:

Gloves. Face shield. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

- 6.1.1 Protective equipment for non-emergency personnel
- See heading 8.2

#### 6.1.2 Protective equipment for emergency responders

Gloves. Face shield. Protective clothing. Suitable protective clothing

See heading 8.2

#### 6.2. Environmental precautions

Contain released product. Dam up the liquid spill. Prevent spreading in sewers.

#### 6.3. Methods and material for containment and cleaning up

Take up liquid spill into inert absorbent material, e.g.: sand, saw dust. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

#### 6.4. Reference to other sections

See heading 13.

### SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

#### 7.1. Precautions for safe handling

Keep away from naked flames/heat. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately. Do not discharge the waste into the drain. Keep container tightly closed.

#### 7.2. Conditions for safe storage, including any incompatibilities

#### 7.2.1 Safe storage requirements:

Store in a cool area. Store in a dry area. Protect against frost. Ventilation at floor level. Keep only in the original container. Meet the legal requirements. **7.2.2 Keep away from:** 

Heat sources, (strong) acids, (strong) bases, oxidizing agents, water/moisture, metals.

- 7.2.3 Suitable packaging material:
  - No data available

#### 7.2.4 Non suitable packaging material:

Aluminium, copper, iron, zinc.

#### 7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.1.1 Occupational exposure

#### a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

#### Belgium

4,4'-Diisocyanate de diphénylméthane (MDI)	Time-weighted average exposure limit 8 h	0.005 ppm
	Time-weighted average exposure limit 8 h	0.052 mg/m <sup>3</sup>
Talc (sans fibre d'amiante)	Time-weighted average exposure limit 8 h	2 mg/m <sup>3</sup>

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Revision number: 0303

<b>T</b> U ( ) I U				0.07 / 3
Talk (respirabel)		Time-weighted average	e exposure limit 8 h (Public occupational	exposure 0.25 mg/m <sup>3</sup>
Franco				
France				
4,4 <sup>-</sup> -Diisocyanate de diphenylmetr	hane	réglementaire indicat	e exposure limit 8 h (VL: Valeur non ve)	0.01 ppm
		Time-weighted average	e exposure limit 8 h (VL: Valeur non	0.1 mg/m <sup>3</sup>
		Short time value (VI : )	/aleur non réglementaire indicative)	0.02 ppm
		Short time value (VL: )	/aleur non réglementaire indicative)	0.2 mg/m <sup>3</sup>
Germany		•		
4 4'-Methylendinhenyldiisocyanat	r	Time-weighted average	re exposure limit 8 h (TRGS 900)	$0.05  mg/m^3$
pMDI (als MDI berechnet)		Time-weighted average	ge exposure limit 8 h (TRGS 900)	0.05 mg/m <sup>3</sup>
<u> </u>				
UK	methyl isocyanate	Time-weighted average	re exposure limit 8 h (Morkplace exposure	e limit 0.02 mg/m <sup>3</sup>
isocyanates, an (as inco) Except i	metry isocyanate	(EH40/2005))		
		Short time value (Wor	kplace exposure limit (EH40/2005))	0.07 mg/m <sup>3</sup>
Talc, respirable dust		Time-weighted averag (EH40/2005))	e exposure limit 8 h (Workplace exposure	e limit 1 mg/m³
Methylene hisphenyl isocyanato (	 MDI)	Time-weighted average	e exposure limit 8 h (TLV - Adopted Value	a) 0.005 nnm
Talc (containing no asbestos fibor	() ()	Time-weighted average	re exposure limit 8 h (TLV - Adopted Value	$\frac{0.005 \text{ ppill}}{2 \text{ mg/m}^3 (\text{R E})}$
B E: Respirable fraction. The value	<u>»</u> e is for narticulate matter c	ontaining no ashestos and	1 < 1% crystalling silica	
b) National biological limit values of limit values are applicable and a	<u>i</u> wailable these will be lister	bolow		
2 Sampling methods		i below.		
Product name		Test	Number	
4,4-Methylene Bisphenyl Isocyana	ite (MDI) (Isocyanates)	NIOSH	5521	
4,4'-Methylenebis(phenylisocyana	ate)	NIOSH	5525	
Isocyanates		NIOSH	5521	
Isocyanates		NIOSH	5522	
Methylene Bisphenyl Isocyanate -	(MDI)	OSHA	18	
Methylene Bisphenyl Isocyanate (I	MDI)	IOSHA	47	
Methylene Bisphenyl Isocyanate			47	
		OSHA	33	
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Applicable limit values when us     flimit values are applicable and a     A Threshold values     DNEL/DMEL - Workers     A,4'-methylenediphenyl diisocyan:     Effect level (DNEL/DMEL)     DNEL     d,4'-methylenediphenyl diisocyan:     Effect level (DNEL/DMEL)     DNEL     reaction mass of 4,4'-methylenedi     Effect level (DNEL/DMEL)     DNEL     Effect level (DNEL/DMEL)     DNEL	sing the substance or mixt available these will be listed ate, oligomers Type Long-term systemic eff Acute systemic effects Long-term local effects inh Acute local effects der Acute local effects der ate Type Long-term local effects inh iphenyl diisocyanate and or Type Long-term local effects inh iphenyl diisocyanate and or	OSHA OSHA ure as intended I below. inhalation inhalation alation dermal mal s inhalation alation -(p-isocyanatobenzyl)phe s inhalation alation	Value     Re       0.05 mg/m³     0.1 mg/m³       0.1 mg/m³     0.05 mg/m³       0.1 mg/m³     0.1 mg/m³       50 mg/kg bw/day     28.7 mg/cm³       Value     Re       0.05 mg/m³     0.1 mg/m³       Value     Re       0.1 mg/m³     0.1 mg/m³       Value     Re       0.05 mg/m³     0.1 mg/m³       0.1 mg/m³     0.1 mg/m³       0.1 mg/m³     0.1 mg/m³       0.1 mg/m³     0.1 mg/m³	mark mark mark
Applicable limit values when us     flimit values are applicable and a     A Threshold values     DNEL/DMEL - Workers     A4'-methylenediphenyl diisocyan:     Effect level (DNEL/DMEL)     DNEL     DNEL     Effect level (DNEL/DMEL)     Effect level (DNEL/DMEL)	sing the substance or mixt available these will be listed ate, oligomers Type Long-term systemic eff Acute systemic effects Long-term local effects inh Acute local effects der Acute local effects der Acute local effects der Acute local effects inh iphenyl diisocyanate and o- Type Long-term local effect inh iphenyl diisocyanate and o- Acute local effects inh iphenyl diisocyanate and o-	OSHA OSHA I pelow. I below. I below. I fects inhalation inhalation s inhalation alation c dermal mal s inhalation alation -(p-isocyanatobenzyl)phe s inhalation alation alation	47       33       Value     Re       0.05 mg/m³     0.1 mg/m³       0.1 mg/m³     0.05 mg/m³       0.1 mg/m³     0.1 mg/m³       50 mg/kg bw/day     28.7 mg/cm³       Value     Re       0.05 mg/m³     0.1 mg/m³       Value     Re       0.05 mg/m³     0.1 mg/m³       byl isocyanate     Value     Re       0.05 mg/m³     0.1 mg/m³       0.1 mg/m³     0.1 mg/m³	mark mark mark
Applicable limit values when us     flimit values are applicable and a     Arhreshold values     DNEL/DMEL - Workers     A4'-methylenediphenyl diisocyan:     Effect level (DNEL/DMEL)     DNEL     DNEL     Effect level (DNEL/DMEL)	sing the substance or mixt available these will be listed ate, oligomers Type Long-term systemic eff Acute systemic effects Long-term local effects inh Acute local effects der ate Type Long-term local effects inh iphenyl diisocyanate and o Type Long-term local effects inh iphenyl diisocyanate and o Type	OSHA OSHA ure as intended below. i below. i inhalation s inhalation alation c dermal mal s inhalation alation -(p-isocyanatobenzyl)phe s inhalation alation	47       33       Value     Re       0.05 mg/m³     0.1 mg/m³       0.1 mg/m³     0.05 mg/m³       0.1 mg/m³     0.1 mg/m³       S0 mg/kg bw/day     28.7 mg/cm³       Value     Re       0.05 mg/m³     0.1 mg/m³       10.1 mg/m³     10.1 mg/m³       11 isocyanate     Value     Re       0.05 mg/m³     0.1 mg/m³       Value     Re       0.05 mg/m³     0.1 mg/m³       Value     Re       Value     Re       0.1 mg/m³     10.1 mg/m³	mark mark mark mark
3 Applicable limit values when us i limit values are applicable and a 4 Threshold values DNEL/DMEL - Workers 4,4'-methylenediphenyl diisocyan: Effect level (DNEL/DMEL) DNEL 4,4'-methylenediphenyl diisocyan: Effect level (DNEL/DMEL) DNEL Teaction mass of 4,4'-methylenedi Effect level (DNEL/DMEL) DNEL Talc (Mg3H2(SiO3)4) Effect level (DNEL/DMEL) DNEL DNEL	sing the substance or mixt available these will be listed ate, oligomers Type Long-term systemic eff Acute systemic effects Long-term local effects inh Acute local effects der ate Type Long-term local effects inh iphenyl diisocyanate and o Type Long-term local effects inh iphenyl diisocyanate and o Type Long-term local effects inh iphenyl diisocyanate and o Type Long-term local effects inh	OSHA OSHA ure as intended I below. i control below. i inhalation i inhalation alation c dermal mal s inhalation alation -(p-isocyanatobenzyl)phe s inhalation alation i dermal fects inhalation	47       33       Value     Re       0.05 mg/m³     0.1 mg/m³       0.1 mg/m³     0.05 mg/m³       0.1 mg/m³     0.1 mg/m³       S0 mg/kg bw/day     28.7 mg/cm³       Value     Re       0.05 mg/m³     0.1 mg/m³       10 mg/m³     10.1 mg/m³       11 isocyanate     Re       0.05 mg/m³     0.1 mg/m³       Value     Re       0.05 mg/m³     10.1 mg/m³       Value     Re       0.1 mg/m³     10.1 mg/m³       Value     Re       0.1 mg/m³     10.1 mg/m³	mark mark mark mark mark
3 Applicable limit values when us i flimit values are applicable and a 4 Threshold values DNEL/DMEL - Workers 4,4'-methylenediphenyl diisocyan: Effect level (DNEL/DMEL) DNEL A.4'-methylenediphenyl diisocyan: Effect level (DNEL/DMEL) DNEL Teaction mass of 4,4'-methylenedi Effect level (DNEL/DMEL) DNEL Talc (Mg3H2(SiO3)4) Effect level (DNEL/DMEL) DNEL DNEL	sing the substance or mixt available these will be listed ate, oligomers Type Long-term systemic eff Acute systemic effects Acute local effects inh Acute local effects der ate Type Long-term local effects inh iphenyl diisocyanate and o Type Long-term local effects inh iphenyl diisocyanate and o Type Long-term local effects inh Acute local effects inh iphenyl diisocyanate and o Type Long-term local effects inh Acute systemic effects	OSHA OSHA ure as intended below. i below. i inhalation i inhalation alation c dermal mal s inhalation alation -(p-isocyanatobenzyl)phe s inhalation alation i dermal fects inhalation	47         33         Value       Re         0.05 mg/m³       0.1 mg/m³         0.1 mg/m³       0.05 mg/m³         0.1 mg/m³       0.1 mg/m³         0.1 mg/m³       0.1 mg/m³         0.1 mg/m³       0.1 mg/m³         Value       Re         0.05 mg/m³       0.1 mg/m³         value       Re         0.1 mg/m³       2.16 mg/m³         value       Re	mark mark mark mark mark
3 Applicable limit values when us filmit values are applicable and a 4 Threshold values DNEL/DMEL - Workers 4.4'-methylenediphenyl diisocyan: Effect level (DNEL/DMEL) DNEL 4.4'-methylenediphenyl diisocyan: Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL	sing the substance or mixt available these will be listed ate, oligomers Type Long-term systemic eff Acute systemic effects Acute local effects inh Acute local effects der Acute local effects der Acute local effects der Acute local effects inh iphenyl diisocyanate and o Type Long-term local effect Acute local effects inh iphenyl diisocyanate and o Type Long-term local effects inh Acute local effects inh iphenyl disocyanate and o Type Long-term systemic eff Acute systemic effects Long-term local effects inh	OSHA OSHA I pelow. i	47         33         33         33         0.05 mg/m³         0.1 mg/m³         0.05 mg/m³         0.05 mg/m³         0.1 mg/m³         50 mg/kg bw/day         28.7 mg/cm³         Value       Re         0.05 mg/m³       0.1 mg/m³         value       Re         0.15 mg/m³       2.16 mg/m³         2.16 mg/m³       2.16 mg/m³         3.6 mg/m³       1	mark mark mark mark mark
3 Applicable limit values when us flimit values are applicable and a 4 Threshold values DNEL/DMEL - Workers 4.4'-methylenediphenyl diisocyan: Effect level (DNEL/DMEL) DNEL 4.4'-methylenediphenyl diisocyan: Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL	sing the substance or mixt available these will be listed ate, oligomers Type Long-term systemic eff Acute systemic effects Long-term local effect Acute local effects inh Acute local effects der Acute local effects der Acute local effects inh iphenyl diisocyanate and o Type Long-term local effect Acute local effects inh iphenyl diisocyanate and o Type Long-term local effect Acute local effects inh Acute systemic effects inh Cong-term systemic effects Acute systemic effects Long-term local effects inh	OSHA OSHA ure as intended I below. inhalation inhalation alation dermal mal s inhalation alation -(p-isocyanatobenzyl)phe s inhalation alation -(fects inhalation alation inhalation s inhalation alation	47         33         33         33         0.05 mg/m³         0.1 mg/m³         0.05 mg/m³         0.1 mg/m³         0.1 mg/m³         50 mg/kg bw/day         28.7 mg/cm³         Value       Re         0.05 mg/m³       0.1 mg/m³         value       Re         0.105 mg/m³       2.16 mg/m³         2.16 mg/m³       2.16 mg/m³         3.6 mg/m³       3.6 mg/m³	mark mark mark mark mark
3 Applicable limit values when us f limit values are applicable and a 4 Threshold values DNEL/DMEL - Workers 4.4'-methylenediphenyl diisocyani Effect level (DNEL/DMEL) DNEL 4.4'-methylenediphenyl diisocyani Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL	sing the substance or mixt available these will be listed ate, oligomers Type Long-term systemic eff Acute systemic effects Long-term local effect Acute local effects inh Acute local effects der Acute local effects der Acute local effects inh iphenyl diisocyanate and o Type Long-term local effect inh iphenyl diisocyanate and o Type Long-term local effects inh Acute local effects inh Acute local effects inh Acute systemic effects Inng-term local effects inh Cong-term local effects inh Long-term local effects inh Cong-term local effects inh Acute local effects inh Long-term systemic effects inh	OSHA OSHA ure as intended below. inhalation inhalation alation i dermal mal s inhalation alation -(p-isocyanatobenzyl)phe s inhalation alation -(fets inhalation alation s inhalation i inhalation i inhalation s inhalation fects inhalation s inhalation fects dermal	47         33         33         33         33         33         0.05 mg/m³         0.1 mg/m³         0.05 mg/m³         0.1 mg/m³         0.1 mg/m³         50 mg/kg bw/day         28.7 mg/cm³         Value       Re         0.05 mg/m³       0.1 mg/m³         10.1 mg/m³       10.1 mg/m³         2.16 mg/m³       3.6 mg/m³         3.6 mg/m³       3.6 mg/m³         3.6 mg/m³       3.2 mg/kg bw/day	mark mark mark mark mark
Applicable limit values when us     Applicable limit values when us     Athreshold values     DNEL/DMEL - Workers     A4'-methylenediphenyl diisocyani     Effect level (DNEL/DMEL)     DNEL     A4'-methylenediphenyl diisocyani     Effect level (DNEL/DMEL)     DNEL     Calc (Mg3H2(SiO3)4)     Effect level (DNEL/DMEL)     DNEL     DNEL     Calc (Mg3H2(SiO3)4)     Effect level (DNEL/DMEL)     DNEL     DNEL     DNEL	sing the substance or mixt available these will be listed ate, oligomers Type Long-term systemic eff Acute systemic effects Acute local effects inh Acute local effects der Acute local effects der Acute local effects der Acute local effects der Acute local effects inh iphenyl diisocyanate and o Type Long-term local effect inh iphenyl diisocyanate and o Type Long-term systemic eff Acute systemic effects inh Cong-term systemic eff Acute systemic effects inh Long-term local effects inh Long-term local effects inh Long-term systemic eff Acute local effects inh	OSHA OSHA ure as intended i below. inhalation s inhalation alation c dermal mal s inhalation alation -(p-isocyanatobenzyl)phe s inhalation alation fects inhalation s inhalation s inhalation fects dermal s dermal	47         33         33         33         33         33         33         0.05 mg/m³         0.1 mg/m³         0.05 mg/m³         0.1 mg/m³         0.1 mg/m³         28.7 mg/cm³         Value       Re         0.05 mg/m³       0.1 mg/m³         0.1 mg/m³       0.1 mg/m³         2.16 mg/m³       3.6 mg/m³         3.6 mg/m³       3.2 mg/kg bw/day         3.2 mg/kg bw/day       4.54 mg/cm²	mark mark mark mark

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	0.025 mg/m³	
	Acute systemic effects inhalation	0.05 mg/m³	
	Long-term local effects inhalation	0.025 mg/m³	
	Acute local effects inhalation	0.05 mg/m <sup>3</sup>	
	Acute systemic effects dermal	25 mg/kg bw/day	
	Acute local effects dermal	17.2 mg/cm <sup>3</sup>	
	Acute systemic effects oral	20 mg/kg bw/day	
4'-methylenediphenyl diisocyar	nate	• = = •	
Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term local effects inhalation	0.025 mg/m <sup>3</sup>	
	Acute systemic effects inhalation	0.05 mg/m <sup>3</sup>	
action mass of 4,4'-methylened	liphenyl diisocyanate and o-(p-isocyanatobenzyl)ph	enyl isocyanate	•
Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term local effects inhalation	0.025 mg/m <sup>3</sup>	
	Acute local effects inhalation	0.05 mg/m <sup>3</sup>	
alc (Mg3H2(SiO3)4)			
Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	1.08 mg/m <sup>3</sup>	
	Acute systemic effects inhalation	1.08 mg/m <sup>3</sup>	
	I ong-term local effects inhalation	1.8 mg/m <sup>3</sup>	
	Acute local effects inhalation	1.8 mg/m <sup>3</sup>	
	Long-term systemic effects dermal	21.6 mg/kg hw/day	
	Long-term local effects dermal	2 27 mg/kg bw/day	
	Long-term systemic effects oral		
		160 mg/kg bw/day	
4'-methylenediphenyl diisocyar	nate, oligomers		
Compartments	Value	Remark	
Fresh water	1 mg/l		
Salt water	0.1 mg/l		
Agua (intermittent releases)	10 mg/l		
STP	1 mg/l		
Soil	1 mg/kg soil dw		
4'-methylenediphenyl diisocyar	hate		
Compartments	Value	Remark	
Fresh water	1 mg/l		
Marine water	0.1 mg/l		
Aqua (intermittent releases)	10 mg/l		
STP	1 mg/l		
Soil	1 mg/kg soil dw		
Soil action mass of 4.4'-methylened	1 mg/kg soil dw liphenyl diisocyanate and o-(p-isocyanatobenzyl)ph	envl isocvanate	
Soil action mass of 4,4'-methylenec Compartments	1 mg/kg soil dw liphenyl diisocyanate and o-(p-isocyanatobenzyl)ph Value	enyl isocyanate Bemark	
Soil action mass of 4,4'-methylenec Compartments Fresh water	1 mg/kg soil dw liphenyl diisocyanate and o-(p-isocyanatobenzyl)ph Value	enyl isocyanate Remark	
Soil action mass of 4,4'-methylened Compartments Fresh water Aqua (intermittent releases)	1 mg/kg soil dw liphenyl diisocyanate and o-(p-isocyanatobenzyl)ph Value 1 mg/l 10 mg/l	enyl isocyanate Remark	
Soil <u>action mass of 4,4'-methylenec</u> Compartments Fresh water Aqua (intermittent releases) Marine water	1 mg/kg soil dw liphenyl diisocyanate and o-(p-isocyanatobenzyl)ph Value 1 mg/l 10 mg/l 0.1 mg/l	enyl isocyanate Remark	
Soil <u>action mass of 4,4'-methylenec</u> Compartments Fresh water Aqua (intermittent releases) Marine water STP	1 mg/kg soil dw       liphenyl diisocyanate and o-(p-isocyanatobenzyl)ph       Value       1 mg/l       10 mg/l       0.1 mg/l       1 mg/l	enyl isocyanate Remark	
Soil <u>action mass of 4,4'-methylenec</u> Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil	1 mg/kg soil dw       liphenyl diisocyanate and o-(p-isocyanatobenzyl)ph       Value       1 mg/l       10 mg/l       0.1 mg/l       1 mg/l	enyl isocyanate Remark	
Soil action mass of 4,4'-methylened Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Jac (Ma3H2(SiO2M)	1 mg/kg soil dw       liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi       Value       1 mg/l       10 mg/l       0.1 mg/l       1 mg/l       1 mg/l       1 mg/l	enyl isocyanate Remark	
Soil action mass of 4,4'-methylened Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Jic (Mg3H2(SiO3)4) Compartments	1 mg/kg soil dw       liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi       Value       1 mg/l       10 mg/l       0.1 mg/l       1 mg/kg soil dw	enyl isocyanate Remark	
Soil Soil Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Ic (Mg3H2(SiO3)4) Compartments	1 mg/kg soil dw liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi Value 1 mg/l 10 mg/l 0.1 mg/l 1 mg/l 1 mg/kg soil dw Value F07.07 mg/l	enyl isocyanate Remark	
Soil Soil Saction mass of 4,4'-methylened Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Ic (Mg3H2(SiO3)4) Compartments Fresh water	1 mg/kg soil dw           liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi           Value           1 mg/l           0.1 mg/l           1 mg/l           1 mg/l           1 mg/l           1 mg/l           9           1 mg/l           1 mg/l           1 mg/l           597.97 mg/l           597.97 mg/l	enyl isocyanate Remark	
Soil Soil Soil Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Ic (Mg3H2(SiO3)4) Compartments Fresh water Fresh water (intermittent relea	1 mg/kg soil dw           liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi           Value           1 mg/l           10 mg/l           0.1 mg/l           1 mg/l           1 mg/l           1 mg/l           9           1 mg/l           1 mg/l           1 mg/l           597.97 mg/l           ses)         597.97 mg/l	enyl isocyanate Remark	
Soil action mass of 4,4'-methylenec Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Ic (Mg3H2(SiO3)4) Compartments Fresh water Fresh water Fresh water (intermittent relea Varine water	1 mg/kg soil dw           liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi           Value           1 mg/l           10 mg/l           0.1 mg/l           1 mg/l           1 mg/l           1 mg/l           ses)           597.97 mg/l           ses)         597.97 mg/l           141.26 mg/l	enyl isocyanate Remark	
Soil Soil Sold A,4'-methylenec Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Ic (Mg3H2(SiO3)4) Compartments Fresh water Fresh water Fresh water Marine water (intermittent relea Marine water (intermittent relea	1 mg/kg soil dw         liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi         Value         1 mg/l         10 mg/l         0.1 mg/l         1 mg/l         1 mg/l         1 mg/l         ses)         597.97 mg/l         sess)       597.97 mg/l         141.26 mg/l         asses)       141.26 mg/l	enyl isocyanate Remark	
Soil Soil Saction mass of 4,4'-methylened Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Ilc (Mg3H2(SiO3)4) Compartments Fresh water Fresh water Fresh water Marine water Marine water (intermittent relea Fresh water sediment	1 mg/kg soil dw         liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi         Value         1 mg/l         10 mg/l         0.1 mg/l         1 mg/l         1 mg/l         1 mg/l         ses)         597.97 mg/l         ses)       597.97 mg/l         141.26 mg/l         sases)       141.26 mg/l         31.33 mg/kg sediment dw	enyl isocyanate Remark	
Soil Soil Soll Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Ilc (Mg3H2(SiO3)4) Compartments Fresh water Fresh water Fresh water Marine water Marine water (intermittent relea Marine water sediment Marine water sediment	1 mg/kg soil dw           liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi           Value           1 mg/l           0.1 mg/l           1 mg/l           1 mg/l           1 mg/l           1 mg/l           ses)           597.97 mg/l           ses)           597.97 mg/l           att.26 mg/l           sases)           141.26 mg/l           31.33 mg/kg sediment dw           3.13 mg/kg sediment dw	enyl isocyanate  Remark  Remark  Remark  Remark  Remark  Remark  Remark	
Soil Soil Soil Compartments Fresh water Aqua (intermittent releases) Marine water STP Soil Soil Compartments Fresh water Fresh water Fresh water Marine water (intermittent relea Marine water (intermittent relea Marine water sediment Marine water sediment Marine water sediment Air	1 mg/kg soil dw           liphenyl diisocyanate and o-(p-isocyanatobenzyl)phi           Value           1 mg/l           10 mg/l           0.1 mg/l           1 mg/l           1 mg/l           1 mg/l           ses)           597.97 mg/l           sess)           141.26 mg/l           al.33 mg/kg sediment dw           3.13 mg/kg sediment dw           10 mg/m³	enyl isocyanate  Remark    Remark	

#### 8.1.5 Control banding

If applicable and available it will be listed below.

#### 8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

#### 8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection:

Reason for revision: 3.2

Full face mask with filter type A at conc. in air > exposure limit.

b) Hand protection:

Protective gloves against chemicals (EN 374), Change gloves frequently.							
Materials	Measured breakthrough time	Thickness	Protection index				
nitrile rubber	> 480 minutes	> 0.5 mm	Class 6				

c) Eye protection:

Face shield.

d) Skin protection:

### Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical form	Liquid
Odour	No data available on odour
Odour threshold	No data available
Colour	Beige
Particle size	Not applicable (liquid)
Explosion limits	No data available
Flammability	Not classified as flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	20000 mPa.s ; 20 °C
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	> 200 °C
Evaporation rate	< 1 ; Butyl acetate
Relative vapour density	>1
Vapour pressure	< 0.01 hPa ; 25 °C
Solubility	Water ; insoluble
Relative density	1.3
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Flash point	203 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
рН	No data available

#### 9.2. Other information

Absolute density

1288 kg/m³

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Temperature above flashpoint: higher fire/explosion hazard.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Decomposes on exposure to water (moisture).

#### 10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

#### 10.5. Incompatible materials

(strong) acids, (strong) bases, oxidizing agents, water/moisture, metals.

#### 10.6. Hazardous decomposition products

On heating: release of toxic/combustible gases/vapours (hydrogen cyanide, isocyanates). On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

### **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

#### 11.1.1 Test results

Acute toxicity

Reason for revision: 3.2

Publication date: 2006-02-01 Date of revision: 2019-04-15

Revision number: 0303

#### MEGAPLAST PU 90S prepolymer

No (test)data on the mixture available

Classification is based on the relevant ingredients polymethylene polyphenyl isocyanate

	Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
	Oral	LD50		> 10000 mg/kg		Rat	Literature study	
	Dermal	LD50		> 5000 mg/kg		Rabbit	Literature study	
	Inhalation (vapours)	LD50		10 mg/l - 20 mg/l	4 h	Rat	Literature study	
44	Inhalation	liisocvanate	oligomers	category 4			Literature study	
-,-	Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
				> 5000 mg/kg bw		Pat (fomalo)	determination	inemark
	Dermal		DECD 425	> 5000 mg/kg bw	24 h	Rat (lellale)	Read-across	
	Dermai	LD50	402	> 9400 mg/kg bw	24 n	female)	Read-across	
	Inhalation (aerosol)	LC50	OECD 403	310 mg/m <sup>3</sup> air	4 h	Rat (male / female)	Read-across	
iso	cyanic acid, polymethy	/lenepolyphe	nylene ester, polymer	<u>r with alpha-hydro-o</u>	mega-hydroxypoly[	oxy(methyl-1,2-etha	anediyl)]	
	Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
	Inhalation (mist)	LC50		0.49 mg/lcategory 4	4 h	Rat	Literature study	
4,4	-methylenediphenyl o	diisocyanate						
	Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
	Oral	LD50	Equivalent to OECD 401	> 7616 mg/kg		Rat (female)	Read-across	
	Dermal	LD50	Equivalent to OECD 402	> 9400 mg/kg bw	24 h	Rabbit (male / female)	Read-across	
	Inhalation (aerosol)	LC50	Equivalent to OECD 403	0.49 mg/l air	4 h	Rat (male / female)	Read-across	
	Inhalation			category 4			Annex VI	
4,4	-methylenediphenyl (	diisocyanate,	oligomeric reaction p	roducts with alpha-h	ydro-omega-hydro	xypoly(oxy-1,2-etha	nediyl)	
	Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
	Inhalation			category 4			Literature	
rea	ction mass of 4,4'-me	thylenediphe	nyl diisocyanate and o	o-(p-isocyanatobenzy	(I)phenyl isocyanate	<u>e</u>		
	Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
	Oral	LD50	Other	> 2000 mg/kg bw		Rat (male / female)	Data waiving	
	Dermal	LD50	Equivalent to OECD 402	> 9400 mg/kg bw	24 h	Rabbit (male / female)	Read-across	
	Inhalation (aerosol)	LC50	OECD 403	0.368 mg/l	4 h	Rat (male / female)	Experimental value	
	Inhalation			category 4			Expert judgement	
iso	Classification of this s	substance is o	debatable as it does no	ot correspond to the with alpha, alpha, al	conclusion from th	e test rivitris[omega-hvdro		-ethanedivl)]]
	Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
	Inhalation			category 4			Literature	
4,4	- -methylenediphenyl (	diisocyanate,	oligomeric reaction p	roducts with glycero	l, propoxylated			
	Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
	Inhalation			category 4			Literature study	
Tal	c (Mg3H2(SiO3)4)					-1	· · ·	
	Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
	Oral	LD50	OECD 423	> 5000 mg/kg bw		Rat (male)	Experimental value	
	Dermal	LD50	OECD 402	> 2000 mg/kg bw	24 h	Rat (male / female)	Experimental value	
	Inhalation (aerosol)	LC50	OECD 403	> 2.1 mg/l	4 h	Rat (male / female)	Experimental value	
onc	lusion		•			• ·		
Hai No	rmful if inhaled. t classified as acute to	xic in contact	: with skin					
วท f	or revision: 3.2					Publication date: 2	2006-02-01	

Reason for revision: 3.2

Date of revision: 2019-04-15

Not classified as acute toxic if swallowed

Corrosion/irritation

### MEGAPLAST PU 90S prepolymer

No (test)data on the mixture available

Classification is based on the relevant ingredients polymethylene polyphenyl isocyanate

	Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
	Eye	Irritating; category 2					Literature study	
	Skin	Irritating; category 2					Literature study	
	Inhalation	Irritating; STOT SE cat.3					Literature study	
4,4	'-methylenediphen	yl diisocyanate, olig	omers					
	Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
	Eye	Not irritating	OECD 405	24 h	24; 48; 72 hours	Rabbit	Read-across	
	Skin	Irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Read-across	
	Skin	Corrosive	OECD 404	4 h	24; 48; 72 hours	Rabbit	Read-across	
	Skin	Irritating; category 2					Annex VI	
iso	cyanic acid, polyme	thylenepolyphenyle	ne ester, polymer	r with alpha-hydro-on	nega-hydroxypoly[oxy	y(methyl-1,2-eth	anediyl)]	
	Route of exposure	Result	Method	Exposure time	Time point	Species	Value	Remark
	-						determination	
	Eye	Irritating					Literature study	
	Skin	Irritating					Literature study	
	Inhalation	Irritating					Literature study	
<u>4,4</u>	'-methylenediphen	yl diisocyanate		•	-	-	•	
	Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
	Eye	Slightly irritating				Rabbit	Experimental value	
	Eye	Irritating				Human	Weight of evidence	
Ī	Skin	Irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Read-across	
	Skin	Irritating				Human	Weight of evidence	
	Inhalation	Irritating				Human	Weight of evidence	
<u>4,4</u>	-methylenediphen	yl diisocyanate, olig	omeric reaction p	roducts with alpha-hy	dro-omega-hydroxy	ooly(oxy-1,2-eth	anediyl)	
	Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
	Eye	Irritating; category 2					Literature	
	Skin	Irritating; category 2					Literature	
	Inhalation	Irritating; STOT SE cat.3					Literature	
rea	action mass of 4,4'-n	nethylenediphenyl	diisocyanate and o	o-(p-isocyanatobenzyl	)phenyl isocyanate		•	
	Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
	Еуе	Not irritating	OECD 405	24 h		Rabbit	Read-across	Single treatment with rinsing
	Еуе	Irritating; category 2					Literature	
İ	Skin	Irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Read-across	
	Inhalation (aerosol)	Irritating		4 h		Mouse	Experimental value	

Pouto of overance	Bocult	Mothad	Exposure time	Timo noint	Spacies	Value	Bomarle
Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating; category 2					Literature	
Skin	Irritating; category 2					Literature	
Inhalation	Irritating;					Literature	
 1'-methylenedinhen	JIOT SE Cal.S	ligometric reaction pro	ducts with glycerol	nronoxylated			
Pouto of oxnosuro	Recult	Mothod	Exposure time	Time point	Spacios	Value	Pomark
Route of exposure	Result	Method	exposure time		species	determination	Kennark
Eye	Irritating; category 2					Literature study	
Skin	Irritating; category 2					Literature study	
Inhalation	Irritating; STOT SE cat.3					Literature study	
L lc (Mg3H2(SiO3)4)	5101 52 cat.5						
Route of exposure	Result	Method	Exposure time	Time point	Species	Value	Remark
Eye	Not irritating	OECD 405		1; 24; 48; 72 hours	Rabbit	Experimental	
Not applicable (in	Not irritating	EU Method B.46	+		Reconstructed	Experimental	
vitro test)					human epidermi	s value	
(test)data on the r ssification is based	oolymer mixture available on the relevant ir	ngredients					
APLAST PO 905 prep o (test)data on the r assification is based Aymethylene polyph Route of exposure	nolymer mixture available on the relevant ir nenyl isocyanate Result	ngredients Method	Exposure time	Observation time	Species	Value determination	Remark
o (test)data on the r assification is based alymethylene polyph Route of exposure	nixture available on the relevant ir nenyl isocyanate Result Sensitizing; category 1	Method	Exposure time	Observation time point	Species	Value determination	Remark
APLAST PO 905 prep o (test)data on the r assification is based alymethylene polyph Route of exposure Skin	nixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1	ngredients Method	Exposure time	Observation time point	Species	Value determination Literature study Literature study	Remark
ALLAST PO 905 prep o (test)data on the r assification is based alymethylene polyph Route of exposure Skin Inhalation 4'-methylenediphen	nixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 yl diisocyanate, o	Method	Exposure time	Observation time point	Species	Value determination Literature study Literature study	Remark
APLAST PO 905 prep o (test)data on the r assification is based alymethylene polyph Route of exposure Skin Inhalation 4'-methylenediphen Route of exposure	nixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 yl diisocyanate, o Result	Method ligomers Method	Exposure time	Observation time point Observation time	Species Species	Value determination Literature study Literature study Value determination	Remark
APLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation 4'-methylenediphen Route of exposure Skin	nixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 nyl diisocyanate, o Result Sensitizing	Method ligomers Method OECD 406	Exposure time	Observation time point Observation time point 24; 48 hours	Species Species Guinea pig (male	Value determination Literature study Literature study Value determination Read-across	Remark
ArLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation 4'-methylenediphen Route of exposure Skin	nixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 ryl diisocyanate, o Result Sensitizing Sensitizing	Method ligomers Method OECD 406 Other	Exposure time Exposure time	Observation time point Observation time point 24; 48 hours	Species Species Guinea pig (male / female) Rat (male)	Value determination Literature study Literature study Value determination Read-across Experimental value	Remark Remark
ArLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation becyanic acid, polyme Route of exposure	nixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 nyl diisocyanate, o Result Sensitizing Sensitizing Sensitizing Result	ngredients  Method  ligomers  Method  OECD 406  Other ylene ester, polymer v  Method	Exposure time Exposure time with alpha-hydro-or Exposure time	Observation time point Observation time point 24; 48 hours nega-hydroxypoly[oxy Observation time point	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species	Value determination Literature study Literature study Value determination Read-across Experimental value ediy[]] Value determination	Remark Remark Remark
ALLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation ocyanic acid, polyme Route of exposure Skin	mixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 nyl diisocyanate, o Result Sensitizing Sensitizing thylenepolyphem Result Sensitizing	ngredients  Method  ligomers  Method  OECD 406  Other  ylene ester, polymer y  Method	Exposure time Exposure time with alpha-hydro-or Exposure time	Observation time point Observation time point 24; 48 hours nega-hydroxypoly[oxy Observation time point	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species	Value determination Literature study Literature study Value determination Read-across Experimental value ediyi)] Value determination Literature study	Remark Remark Remark
ALLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation cyanic acid, polyme Route of exposure Skin Inhalation	mixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 oyl diisocyanate, o Result Sensitizing Sensitizing thylenepolyphem Result Sensitizing Sensitizing	Method ligomers Method OECD 406 Other ylene ester, polymer y Method	Exposure time Exposure time with alpha-hydro-or Exposure time	Observation time point Observation time point 24; 48 hours nega-hydroxypoly[oxy Observation time point	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species	Value determination Literature study Literature study Value determination Read-across Experimental value ediy[]] Value determination Literature study	Remark Remark
ArLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation ocyanic acid, polyme Skin Inhalation A'-methylenediphen	mixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 yl diisocyanate, o Result Sensitizing Sensitizing thylenepolyphem Result Sensitizing sensitizing Sensitizing Sensitizing Sensitizing	Method  igomers  Method  OECD 406  Other  ylene ester, polymer v  Method	Exposure time Exposure time with alpha-hydro-or Exposure time	Observation time point Observation time point 24; 48 hours 24; 48 hours Observation time point	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species	Value determination Literature study Literature study Value determination Read-across Experimental value ediy[]] Value determination Literature study Literature study	Remark Remark
ALLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation Skin Inhalation Skin Inhalation A'-methylenediphen Route of exposure	mixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing	Method   Method	Exposure time Exposure time vith alpha-hydro-or Exposure time Exposure time	Observation time point Observation time point 24; 48 hours ega-hydroxypoly[oxy Observation time point Observation time point	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species Species	Value determination Literature study Literature study Value determination Read-across Experimental value ediyi)] Value determination Literature study Literature study Value determination	Remark Remark Remark Remark
ALLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation Dypanic acid, polyme Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin	initial production of the relevant in the rele	Method    Method	Exposure time Exposure time intervention Exposure time Exposure time Exposure time Intervention Exposure time Intervention Intervention Exposure time Intervention Exposure time Intervention Exposure time Exposure	Observation time point         Observation time point         24; 48 hours         nega-hydroxypoly[oxy         Observation time point         Observation time point         24; 48 hours	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species Species Species Guinea pig (male / female)	Value determination Literature study Literature study Value determination Read-across Experimental value ediyi)] Value determination Literature study Literature study Value determination Experimental value	Remark Remark Remark Remark
ALLAST PO 9005 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A <sup>1</sup> -methylenediphen Route of exposure Skin Inhalation Acyanic acid, polyme Route of exposure Skin Inhalation A <sup>1</sup> -methylenediphen Route of exposure Skin	initian production of the relevant in the rele	Method    Method	Exposure time I2 h	Observation time point         Observation time point         24; 48 hours         nega-hydroxypoly[oxy         Observation time point         Observation time point         24; 48 hours	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species Species Guinea pig (male / female) Rat (male)	Value determination Literature study Literature study Value determination Read-across Experimental value ediyi)] Value determination Literature study Literature study Value determination Experimental value	Remark Remark Remark Remark
ArLAST PO 905 prep o (test)data on the r assification is based lymethylene polyph Route of exposure Skin Inhalation A <sup>1</sup> -methylenediphen Route of exposure Skin Inhalation Skin Inhalation A <sup>1</sup> -methylenediphen Route of exposure Skin Inhalation Skin Inhalation A <sup>1</sup> -methylenediphen Route of exposure Skin	olymer mixture available on the relevant in nenyl isocyanate Result Sensitizing; category 1 Sensitizing; category 1 yl diisocyanate, o Result Sensitizing Sensitizing thylenepolyphem Result Sensitizing Sensitizing Sensitizing yl diisocyanate Result Not sensitizing Sensitizing Sensitizing Sensitizing Sensitizing Sensitizing	Method    Method	Exposure time Exposure time intervention Exposure time Exposure time Exposure time Intervention Exposure time Intervention Intervention Intervention Exposure time Intervention Interventio	Observation time point         Observation time point         24; 48 hours         nega-hydroxypoly[oxy         Observation time point         Observation time point         Observation time point         24; 48 hours	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species Species Guinea pig (male / female) Rat (male) Rat (male) Guinea pig (female)	Value determination Literature study Literature study Value determination Read-across Experimental value ediyi)] Value determination Literature study Literature study Value determination Experimental value Experimental value	Remark Remark Remark Remark
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ArLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation A'-methylenediphen Route of exposure	initial provided and a second a second and a second a secon	Method  Method  OECD 406  Other  Vene ester, polymer v  Method  Equivalent to OECD  406  Igomeric reaction pro Method  Igomeric reaction pro Method	Exposure time Exposure time Exposure time Vith alpha-hydro-or Exposure time Exposure time 12 h Cucts with alpha-hr Exposure time	Observation time point         Observation time point         24; 48 hours         mega-hydroxypoly[oxy]         Observation time point         Observation time point         24; 48 hours         understand         Observation time point	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species Guinea pig (male / female) Rat (male) Guinea pig (male / female) Guinea pig (female) Guinea pig (female) Species Species	Value determination Literature study Literature study Value determination Read-across Experimental value ediyl)] Value determination Literature study Literature study Value determination Experimental value Experimental value Experimental value	Remark Remark Remark Remark Remark Remark
ALLAST PO 9005 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation Skin Skin Skin	initizing Sensitizing Sensitizing; category 1 Sensitizing; category 1 Sensitizing; category 1 Sensitizing; category 1 Sensitizing	Ingredients  Method  Igomers  Method  OECD 406  Other  Viene ester, polymer v  Method  Equivalent to OECD  406  Igomeric reaction pro Method  Igomeric reaction pro Method	Exposure time Exposure time i Exposure time i Exposure time i Exposure time i L2 h i Exposure time i Exposure time i	Observation time point         Observation time point         24; 48 hours         mega-hydroxypoly[oxy         Observation time point         Observation time point         24; 48 hours         0bservation time point         24; 48 hours         0bservation time point         0bservation time point         0bservation time point         0bservation time point	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species Guinea pig (male / female) Rat (male) Guinea pig (male / female) Guinea pig (female) Species Species Species	Value determination Literature study Literature study Value determination Read-across Experimental value ediyl)] Value determination Literature study Literature study Literature study Value determination Experimental value Experimental value Experimental value Experimental value Experimental value	Remark Remark Remark Remark Remark
ArLAST PO 905 prep o (test)data on the r assification is based dymethylene polyph Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin Inhalation A'-methylenediphen Route of exposure Skin	initizing Sensitizing Sensitizing Sensitizing; category 1 Sensitizing; category 1 Sensitizing; category 1 yl diisocyanate, o Result Sensitizing Sensi	Method	Exposure time Exposure time Exposure time Vith alpha-hydro-or Exposure time Exposure time 12 h Cucts with alpha-hr Exposure time	Observation time point         Observation time point         24; 48 hours         mega-hydroxypoly[oxy]         Observation time point         Observation time point         24; 48 hours         Observation time point         24; 48 hours         Observation time point	Species Species Guinea pig (male / female) Rat (male) (methyl-1,2-ethan Species Guinea pig (male / female) Rat (male) Guinea pig (male / female) Guinea pig (female) Guinea pig (female) Species Species	Value determination Literature study Literature study Value determination Read-across Experimental value ediyl)] Value determination Literature study Literature study Value determination Experimental value Experimental value Experimental value Experimental value Experimental value	Remark Remark Remark Remark Remark

Reason for revision: 3.2

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal (on the ears)	Sensitizing		6 day(s)		Mouse	Experimental value	
Inhalation	Sensitizing				Rat (male)	Read-across	
ocyanic acid, polym	ethylenpolypheny	lene ester, polym	er with alpha, alpha, al	pha-1,2,3-propanetriy	ltris[omega-hyd	roxypoly[oxy(methyl-1,2-	ethanediyl)]]
Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing; category 1					Literature	
Inhalation	Sensitizing; category 1					Literature	
4'-methylenedipher	nyl diisocyanate, o	oligomeric reactio	n products with glycero	l, propoxylated			
Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing; category 1					Literature study	
Inhalation	Sensitizing; category 1					Literature study	
lc (Mg3H2(SiO3)4)				•			
Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406			Guinea pig (female)	Experimental value	
	Net consitizing				Pat (male)	Exportmontal value	

**Conclusion** 

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### Specific target organ toxicity

MEGAPLAST PU 90S prepolymer

No (test)data on the mixture available

Classification is based on the relevant ingredients

po	iymetnylene polyph	enyi isocyar	late						
	Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
	Inhalation			STOT RE cat.2					Literature study
<u>4,</u> 4	-methylenediphen	yl diisocyana	ate, oligomers						
	Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
	Inhalation (aerosol)	NOAEC	Equivalent to OECD 453	0.2 mg/m <sup>3</sup>	Respiratory tract	No effect	104 weeks (6h / day, 5 days / week)	Rat (male / female)	Read-across
	Inhalation (aerosol)	LOAEC	Equivalent to OECD 453	1 mg/m³	Respiratory tract	Histopatholog y	104 weeks (6h / day, 5 days / week)	Rat (male / female)	Read-across
<u>iso</u>	cyanic acid, polyme	thylenepoly	phenylene ester	polymer with al	pha-hydro-omega	a-hydroxypoly[o	xy(methyl-1,2-ethanediyl)		
	Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
	Inhalation			STOT RE cat.2					Literature study
<u>4,</u> 4	-methylenediphen	yl diisocyana	ate			•			
	Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
	Inhalation (aerosol)	LOAEC		0.23 mg/m <sup>3</sup> air	Lungs	Lung tissue affection/deg eneration	≤ 104 weeks (17h / day, 5 days / week)	Rat (female)	Experimental value
<u>4,</u> 4	-methylenediphen	yl diisocyana	ate, oligomeric re	eaction products	with alpha-hydro	-omega-hydrox	ypoly(oxy-1,2-ethanediyl)		
	Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
	Inhalation			STOT RE cat.2					Literature
<u>rea</u>	ction mass of 4,4'-r	nethylenedi	phenyl diisocyan	ate and o-(p-isod	yanatobenzyl)ph	enyl isocyanate			
	Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
	Inhalation (aerosol)	NOAEC	Equivalent to OECD 453	0.2 mg/m <sup>3</sup> air		No effect	104 weeks (6h / day, 5 days / week)	Rat (male / female)	Read-across
	Inhalation (aerosol)	LOAEC	Equivalent to OECD 453	1.0 mg/m <sup>3</sup> air	Nose	Impairment/d egeneration	104 weeks (6h / day, 5 days / week)	Rat (male / female)	Read-across

Reason for revision: 3.2

Publication date: 2006-02-01 Date of revision: 2019-04-15

Revision number: 0303

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation			STOT RE cat.2					Literature
1,4 <sup>'-methylenedipl</sup>	nenyl diisocyana	ate, oligomeric r	eaction products	with glycerol,	propoxylated			
Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation			STOT RE cat.2	Respiratory tract				Literature study
alc (Mg3H2(SiO3)	4)							
Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	NOAEL	Equivalent to OECD 452	100 mg/kg bw/day		No effect	101 day(s)	Rat (male / female)	Experimental value
Dermal								Data waiving
Inhalation (aerosol)	NOAEC	Equivalent to OECD 452	10.8 mg/m <sup>3</sup> air		No effect	52 weeks (7h / day, 5 days / week)	Rat (male / female)	Experimental value
<u>iclusion</u> lay cause damage lot classified as su lot classified as su	e to organs (resp b-chronically to b-chronically to	biratory system) xic in contact w xic if swallowed	through prolong ith skin I	ed or repeated	exposure if inh	aled.		
genicity (in vitro)								
GAPLAST PU 90S p	repolymer							
No (test)data on th	ne mixture avail	able						

	Result	Method	Test substrate	Effect	Value determination	Remark
	Negative	OECD 471	Bacteria (S.typhimurium)	No effect	Read-across	
4,4	-methylenediphenyl diisocy	<u>vanate</u>				
	Result	Method	Test substrate	Effect	Value determination	Remark
	Negative with metabolic	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
	activation, negative					
	without metabolic					
	activation					
	/ / - · - · · · ·					

Tal	alc (Mg3H2(SiO3)4)										
	Result	Method	Test substrate	Effect	Value determination	Remark					
	Negative with metabolic activation, negative	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value						
	activation										

#### Mutagenicity (in vivo)

MEGAPLAST PU 90S prepolymer

No (test)data on the mixture available

Classification is based on the relevant ingredients

4,4'-methylenediphenyl diisocyanate, oligomers

	Result	Method	Exposure time	Test substrate	Organ	Value determination
	Negative	OECD 474	3 weeks (1h / day, 1 day	Rat (male)		Read-across
			/ week)			
<u>4,</u> 4	-methylenediphenyl diisocyanate					
	Result	Method	Exposure time	Test substrate	Organ	Value determination
	Negative	OECD 474	3 weeks (1h / day, 1 day	Rat (male)		Experimental value
			/ week)			
Talo	<u>c (Mg3H2(SiO3)4)</u>					
	Result	Method	Exposure time	Test substrate	Organ	Value determination
	Negative (Oral (stomach tube))	Equivalent to OECD 478	5 days (1x / day)	Rat (male)		Experimental value

#### **Conclusion**

Not classified for mutagenic or genotoxic toxicity

#### Carcinogenicity

MEGAPLAST PU 90S prepolymer

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate

Route of	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value
exposure								determination
Unknown			category 2					Literature study

Reason for revision: 3.2

Publication date: 2006-02-01

Date of revision: 2019-04-15

AEC AEC ameter AEC	Equivalent to OECD 453 Equivalent to OECD 453 nate Method	1 mg/m <sup>3</sup> air 6 mg/m <sup>3</sup> air Value	104 weeks (6h / day, 5 days / week) 104 weeks (6h / day, 5 days / week) Exposure time	Rat (male / female) Rat (male / female)	No carcinogenic effect Tumor formation	Respiratory tract Respiratory tract	Read-acros
AEC iyl diisocyai ameter AEC	OECD 453 Equivalent to OECD 453 nate Method	6 mg/m <sup>3</sup> air Value	5 days / week) 104 weeks (6h / day, 5 days / week)	female) Rat (male / female)	effect Tumor formation	tract Respiratory tract	Dead acres
AEC iyl diisocya ameter AEC	Equivalent to OECD 453 nate Method	6 mg/m <sup>3</sup> air Value	104 weeks (6h / day, 5 days / week)	Rat (male / female)	Tumor formation	Respiratory tract	Deed eares
iyl diisocya ameter AEC	OECD 453 nate Method	Value	5 days / week)	female)	formation	tract	
ameter AEC	nate Method	Value	Exposure time				
ameter AEC	Method	Value	Exposure time				
AEC	0.1			Species	Effect	Organ	Value determinat
	Other	0.7 mg/m <sup>3</sup> air	104 weeks (17h / day, 5 days / week)	Rat (female)	No carcinogenic effect		Experiment
vl diisocva	nate, oligomeric r	reaction products	with alpha-hydro-omeg	a-hydroxypoly(oxy	/-1.2-ethanedivl)		Vulue
ameter	Method	Value	Exposure time	Snecies	Effect	Organ	Value
unicter	Mictilou	Value		Species		organ	determinat
		category 2					Literaturo
methylene	L diphenyl diisocya	nate and o-(n-isoc	L vanatobenzvl)nhenvl isv	l ocvanate		1	
ameter	Method	Value	Exposure time	Species	Effect	Organ	Value
AFC	Equivalent to	$1 \text{ mg/m}^3$	104 weeks (6h / day	Rat (male /	No effect		Read-acros
ALC	OECD 453	1 111g/111	5 days / week)	female)	No enect		Read-acios
٩EC	Equivalent to	6 mg/m³ air	104 weeks (6h / day,	Rat (male /	Tumor	Lungs	Read-acros
	OECD 453		5 days / week)	female)	formation		
thylenpoly	/phenylene ester,	, polymer with alpl	na, alpha, alpha-1,2,3-p	ropanetriyltris[om	ega-hydroxypoly[c	xy(methyl-1,2-	ethanediyl)]]
ameter	Method	Value	Exposure time	Species	Effect	Organ	Value determinat
		category 2					Literature
yl diisocya	nate, oligomeric	reaction products	with glycerol, propoxyla	ited			
ameter	Method	Value	Exposure time	Species	Effect	Organ	Value
			1 ·				determinat
		category 2				Respiratory tract	Literature s
ameter	Method	Value	Exposure time	Species	Effect	Organ	Value determinat
AEC	Carcinogenic toxicity study	8.1 mg/m³ air	30 day(s)	Hamster (male / female)	No carcinogenic effect		Experiment value
ΔFI	OECD 453	100 mg/kg	101 day(s)	Rat (male /	No carcinogenic		Experiment
		lbw/dav	1	Itemale)	effect		1.0.00
	ameter ameter ameter AEC thylenpoly ameter yl diisocya ameter ameter ameter AEC	ameter Method  Method  Method  Method  Method  Method  AEC Equivalent to OECD 453  MEC Equivalent to OECD 453  Method  Method  Method  Method  Method  AEC Method  AEC Carcinogenic toxicity study	Ameter     Method     Value       ameter     Method     category 2       methylenediphenyl diisocyanate and o-(p-isoc     ameter     Value       AEC     Equivalent to OECD 453     1 mg/m³       AEC     Equivalent to OECD 453     6 mg/m³ air       AEC     Equivalent to OECD 453     6 mg/m³ air       Method     Value     category 2       thylenpolyphenylene ester, polymer with alph ameter     Method     Value       ameter     Method     Value       category 2     category 2     category 2       value     category 2     category 2       ameter     Method     Value       Category 2     category 2     category 3       AEC     Carcinogenic reaction products value     category 2	Ameter       Method       Value       Exposure time         ameter       Method       category 2         methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl iso       ameter         Ameter       Method       Value       Exposure time         AEC       Equivalent to OECD 453       1 mg/m³       104 weeks (6h / day, 5 days / week)         AEC       Equivalent to OECD 453       6 mg/m³ air       104 weeks (6h / day, 5 days / week)         AEC       Equivalent to OECD 453       6 mg/m³ air       104 weeks (6h / day, 5 days / week)         thylenpolyphenylene ester, polymer with alpha, alpha, alpha-1,2,3-p       ameter       Method       Value       Exposure time         category 2       category 2       yl diisocyanate, oligomeric reaction products with glycerol, propoxyla         ameter       Method       Value       Exposure time         category 2       category 2       ameter       Method       Value       Exposure time         ameter       Method       Value       Exposure time       ameter       AEC       category 2         AEC       Carcinogenic toxicity study       8.1 mg/m³ air       30 day(s)       30 day(s)	Ameter         Method         Value         Exposure time         Species           AEC         Equivalent to OECD 453         1 mg/m³         104 weeks (6h / day, 5 days / week)         Rat (male / female)           AEC         Equivalent to OECD 453         6 mg/m³ air         104 weeks (6h / day, 5 days / week)         Rat (male / female)           AEC         Equivalent to OECD 453         6 mg/m³ air         104 weeks (6h / day, 5 days / week)         Rat (male / female)           thylenpolyphenylene ester, polymer with alpha, alpha, alpha, alpha-1,2,3-propanetriyltris[om ameter         Method         Value         Exposure time         Species           ameter         Method         Value         Exposure time         Species           AEC         Ca	Ameter       Method       Value       Exposure time       Species       Effect         ameter       Category 2	Ameter       Method       Value       Exposure time       Species       Effect       Organ         ameter       (ategory 2)       a       a       a       a       a         ameter       Method       Value       Exposure time       Species       Effect       Organ         ameter       Method       Value       Exposure time       Species       Effect       Organ         AEC       Equivalent to OECD 453       1 mg/m³       104 weeks (6h / day, 5 days / week)       Rat (male / female)       No effect       Image: female       Ima

									determination
	Developmental toxicity	NOAEL	OECD 414	4 mg/m³ air	10 days (6h / day)	Rat	No effect	Foetus	Read-across
	Maternal toxicity	NOAEL	OECD 414	4 mg/m <sup>3</sup> air	10 days (6h / day)	Rat	No effect	General	Read-across
4,4	-methylenediphenyl diisc	ocyanate							
		Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
	Developmental toxicity	NOAEL	OECD 414	3 mg/m <sup>3</sup> air	10 days (6h / day)	Rat (female)	No effect		Experimental value
		LOAEL	OECD 414	9 mg/m³ air	10 days (6h / day)	Rat (female)	Embryotoxicity		Experimental value
	Maternal toxicity	NOAEL	OECD 414	4 mg/kg bw/day	10 day(s)	Rat (female)	No effect		Read-across
	Effects on fertility								Data waiving

Reason for revision: 3.2

#### Talc (Mg3H2(SiO3)4)

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	Developmenta I toxicity study	1600 mg/kg bw/day	10 days (1x / day)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	Developmenta I toxicity study	≥ 1600 mg/kg bw/day	10 days (1x / day)	Rat	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL	Equivalent to OECD 416	> 900 mg/kg bw/day	13 days (1x / day)	Rabbit (female)	No effect		Experimental value

**Conclusion** 

Not classified for reprotoxic or developmental toxicity

#### Toxicity other effects

MEGAPLAST PU 90S prepolymer

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate Parameter Method Value Effect Organ Exposure time Species Value determination LD50 100 mg/kg bw Mouse (male) Experimental value Intraperitoneal

Chronic effects from short and long-term exposure

MEGAPLAST PU 90S prepolymer

Skin rash/inflammation. Respiratory difficulties.

### **SECTION 12: Ecological information**

#### 12.1. Toxicity

MEGAPLAST PU 90S prepolymer

No (test)data on the mixture available

Judgement of the mixture is based on the relevant ingredients

		_						
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity other aquatic organisms	LC50		> 1000 mg,	/l 96 h				Literature study
Toxicity aquatic micro- organisms	EC50	OECD 209	> 100 mg/l		Activated sludge			Literature study
1,4'-methylenediphenyl diisocyar	nate, oligomers	<u> </u>					•	-
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC0	Other	> 3000 mg,	/l 96 h	Oryzias latipes	Semi-static system	Fresh water	Experimental value; Lethal
Acute toxicity crustacea	EC50	OECD 202	129.7 mg/l	24 h	Daphnia magna	Static syste	n Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	EC50	OECD 201	> 1640 mg,	/I 3 day(s)	Scenedesmus subspicatus	Static syste	n Fresh water	Read-across; Growth rate
Long-term toxicity aquatic crustacea	NOEC	OECD 211	≥ 10 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Read-across; Reproduction
Toxicity aquatic micro- organisms	EC50	OECD 209	> 100 mg/l	3 h	Activated sludge	Static syste	n Fresh water	Read-across; Respiration
	Parameter	Method		Value	Duration	Spec	ies	Value determination
Toxicity soil macro-organisms	NOEC	OECD 20	17	≥ 1000 mg/kg so dw	pil 14 day(s)	Eise	nia fetida	Read-across
Toxicity terrestrial plants	EC50	Equivale 208	nt to OECD	> 1000 mg/l	14 day(s)	Ave	ia sativa	Read-across

1,4'-methylenediphenyl diisocy	anate							
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 1000 mg/l	96 h	Danio rerio	Static system	Fresh water	Read-across; Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	129.7 mg/l	24 h	Daphnia magna	Static system	Fresh water	Read-across; Locomotor effect
Toxicity algae and other aquatic plants	EC50	OECD 201	> 1640 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Read-across; Growth rate
Long-term toxicity aquatic crustacea	NOEC	OECD 211	≥ 10 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Read-across; Reproduction
Toxicity aquatic micro- organisms	EC50	OECD 209	> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Read-across; Nominal concentration
alc (Mg3H2(SiO3)4)								
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	ECOSAR v1.00	89581 mg/l	96 h	Pisces		Fresh water	QSAR
Acute toxicity crustacea	LC50	ECOSAR v1.00	36812 mg/l	48 h	Daphnia sp.		Fresh water	QSAR
Toxicity algae and other aquatic plants	EC50	ECOSAR v1.00	7203 mg/l	96 h	Algae		Fresh water	QSAR
	NOEC	ECOSAR v1.00	918 mg/l	30 day(s)	Algae		Fresh water	QSAR
Long-term toxicity fish	NOEC	ECOSAR v1.00	5980 mg/l	30 day(s)	Pisces		Fresh water	QSAR
Long-term toxicity aquatic crustacea	NOEC	ECOSAR v1.00	1460 mg/l	30 day(s)	Daphnia sp.		Fresh water	QSAR

#### **Conclusion**

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

#### 12.2. Persistence and degradability

polymethylene polyphenyl isocyanate

Biodegradation water			
Method	Value	Duration	Value determination
OECD 302C: Inherent Biodegradability: Modified MITI Test (II)	< 60 %		Experimental value
Phototransformation air (DT50 air)			
Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	3.221 h	1500000 /cm <sup>3</sup>	Calculated value
,4 -methylenediphenyl diisocyanate, oligome	rs	•	
Biodegradation water			
Method	Value	Duration	Value determination
OECD 302C: Inherent Biodegradability:	0 %	28 day(s)	Read-across
Modified MITI Test (II)			
Phototransformation air (DT50 air)			
Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	0.92 day(s)		QSAR
Half-life water (t1/2 water)		•	
Method	Value	Primary	Value determination
		degradation/mineralisation	
	20 h		Read-across
,4 -methylenediphenyl diisocyanate		L	
Biodegradation water			
Method	Value	Duration	Value determination
OECD 302C: Inherent Biodegradability:	0 %	28 day(s)	Read-across
Modified MITI Test (II)			

	OECD 302C: Inherent Biodegradability:	0 %	28 day(s)	Read-across					
	Modified MITI Test (II)								
P	hototransformation air (DT50 air)								
	Method	Value	Conc. OH-radicals	Value determination					
	AOPWIN v1.92	0.92 day(s)		QSAR					
н	Half-life water (11/2 water)								
	Method	Value	Primary	Value determination					
			degradation/mineralisation						
		20 h		Read-across					

Reason for revision: 3.2

Method		Value		Conc.	<b>OH-radicals</b>		V	/alue d	etermination
AOPWIN v1.92		18.602 h		1.5E6	/cm³		C	QSAR	
clusion ontains non readily l <b>3. Bioaccumula</b> APLAST PU 90S prep	biodegradable c <b>tive potentia</b> polymer	omponent(s) I							
ethod	Remai	'k	Value		Temperatu	re		Value	determination
	Not ap	plicable (mixture)							
olymethylene polypl	henyl isocyanate	2							
BCF fishes	_								
Parameter	Method	Value	Duratio	n Spe	cies				Value determination
		1		PISC	es				Literature study
Method	Re	mark	Value		Temper	ature		Va	lue determination
KOWWIN			10.46					Ca	lculated
4'-methylenedipher	nyl diisocyanate,	oligomers							
BCF fishes			_	-	•				
Parameter	Method	Value	Duratio	n Spec	cies				Value determination
4'-methylenedipher	nyl diisocyanate	92 - 200	28 049(5		inus carpio				Experimental value
BCF fishes									
Parameter	Method	Value	Duratio	n Spe	cies				Value determination
BCF	OECD 305	92 - 200; GLP	4 week(	s) Cypr	rinus carpio				Experimental value
Log Kow									
Method	Re	mark	Value		Temper	ature		Va	lue determination
OECD 117			4.51		22 °C			Ex	perimental value
BCE other aquatic o	organisms								
Parameter	Method	Value	Duratio	n Spe	cies				Value determination
BCF	BCFBAF v3.01	3.162 l/kg	Duratio						QSAR
Log Kow	4								4 ·
Method	Re	mark	Value		Temper	ature		Va	lue determination
KOWWIN			-9.4		25 °C			QS	AR
4. Mobility in so blymethylene polyp (log) Koc Parameter	<b>oil</b> henyl isocyanate	2	Met	hod		Value			/alue determination
log Koc			SRC	PCKOCWIN v2.0		9.078 -	10.597	(	Calculated value
Percent distribution	<u>ו</u>								
Method	Fraction air	Fraction biota	Fraction	Fraction soil	Fraction	water	Value de	etermir	nation
Fugacity Model	0.0387 %		64.4 %	34.2 %	1.32 %		Calculate	ed valu	e
Level III									
4 <sup>-</sup> -methylenedipher Volatility (Henry's I	aw constant H								
Value	Met	hod	Temperat	ure	Remark			Valu	e determination
8.95E-7 atm m <sup>3</sup> /m	nol		25 °C					Estir	mated value
lc (Mg3H2(SiO3)4)									
(log) Koc									
Parameter			Met	hod		Value		<u>'</u>	Value determination
liog Koc	aw constant II		ISRC	PCKUCWIN V2.0		1.50		0	JSAK
Value	aw constant H)	hod	Temperat	ure	Remark			Valu	e determination
5 5205 20 star an3	/mol SRC	HENRYWIN v3.20	25 °C	uic	Remark			QSA	R
15.539E-29 atm m*	<u>,</u> 1							14,0,1	
Percent distribution	Fraction air	Fraction biota	Fraction	Fraction soil	Fraction	water	Value de	etermir	nation
Percent distribution			seument				-		
Percent distribution Method Mackay level III	0 %	0 %	39.3 %	56 %	4.72 %		QSAR		
Percent distribution Method Mackay level III	0 %	0 %	39.3 %	56 %	4.72 %		QSAR		

#### **Conclusion**

Contains component(s) that adsorb(s) into the soil Contains component(s) with potential for mobility in the soil

#### 12.5. Results of PBT and vPvB assessment

Due to insufficient data no statement can be made whether the component(s) fulfil(s) the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.

#### 12.6. Other adverse effects

#### MEGAPLAST PU 90S prepolymer

#### Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014) **Ozone-depleting potential (ODP)** 

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

#### SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

#### 13.1. Waste treatment methods

#### 13.1.1 Provisions relating to waste

#### **European Union**

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 05 01\* (wastes not otherwise specified in 08: waste isocyanates). Depending on branch of industry and production process, also other waste codes may be applicable.

#### 13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

### 13.1.3 Packaging/Container

**European Union** 

Waste material code packaging (Directive 2008/98/EC).

15 01 10\* (packaging containing residues of or contaminated by dangerous substances).

### SECTION 14: Transport information

#### Road (ADR), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

14. <u>1</u> . UN number	
Transport	Not subject
14.2. UN proper shipping name	
14.3. Transport hazard class(es)	
Hazard identification number	
Class	
Classification code	
14.4. Packing group	
Packing group	
Labels	
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	
Limited quantities	
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
Annex II of MARPOL 73/78	Not applicable, based on available data

### SECTION 15: Regulatory information

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

#### VOC content Directive 2010/75/EU

VOC content	Remark
	Insufficient data

**REACH Annex XVII - Restriction** 

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

		Designation of the substance, of the group of	Conditions of restriction	
		substances or of the mixture		
	· polymethylene polyphenyl isocyanate	Liquid substances or mixtures fulfilling the	1. Shall not be used in:	
	· 4,4'-methylenediphenyl diisocyanate,	criteria for any of the following hazard	<ul> <li>ornamental articles intended to produce light or colour effects by means of different</li> </ul>	
Rea	ason for revision: 3.2		Publication date: 2006-02-01	
			Dete of environmentations 2010 04 15	

Date of revision: 2019-04-15

oligomers	classes or categories set out in Annex I to	phases, for example in ornamental lamps and ashtrays,
isocyanic acid,	Regulation (EC) No 1272/2008:	<ul> <li>tricks and jokes,</li> <li>same for one or more participants, or any article intended to be used as such, even with</li> </ul>
polymer with alpha-hydro-omega-	types A and B, 2.9, 2.10, 2.12, 2.13 categories	ornamental aspects,
hydroxypoly[oxy(methyl-1,2-ethanediyl)]	1 and 2, 2.14 categories 1 and 2, 2.15 types A	2. Articles not complying with paragraph 1 shall not be placed on the market.
<ul> <li>reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)</li> </ul>	to F; (b) bazard classes 3.1 to 3.6.3.7 adverse	3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both if they:
phenyl isocyanate	effects on sexual function and fertility or on	— can be used as fuel in decorative oil lamps for supply to the general public, and,
	development, 3.8 effects other than narcotic	- present an aspiration hazard and are labelled with H304,
	effects, 3.9 and 3.10; (c) hazard class 4.1:	4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted
	(d) hazard class 5.1.	by the European Committee for Standardisation (CEN).
		5. Without prejudice to the implementation of other Community provisions relating to the
		ensure, before the placing on the market, that the following requirements are met:
		a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly
		and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children": and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of
		lamps — may lead to life- threatening lung damage";
		b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly
		life threatening lung damage";
		c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public
		6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency
		to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to
		ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled H304, intended
		<ol> <li>Natural or legal persons placing on the market for the first time lamp oils and grill lighter</li> </ol>
		fluids, labelled with H304, shall by 1 December 2011, and annually thereafter, provide data
		on alternatives to lamp oils and grill lighter fluids labelled H304 to the competent authority in the Member State concerned. Member States shall make those data available to the
		Commission.'
• 4 4'-methylenedinhenyl diisocyanate	Methylenedinhenyl diisocyanate (MDI)	1 Shall not be placed on the market after 27 December 2010, as a constituent of mixtures in
oligomeric reaction products with alpha-	including the following specific isomers: 4,4'-	concentrations equal to or greater than 0,1 % by weight of MDI for supply to the general
hydro-omega-hydroxypoly(oxy-1,2-	Methylenediphenyl diisocyanate; 2,4'-	public, unless suppliers shall ensure before the placing on the market that the packaging:
• reaction mass of 4,4'-methylenediphenyl	Methylenediphenyl diisocyanate; 2,2 - Methylenediphenyl diisocyanate	(a) contains protective gloves which comply with the requirements of council Directive 89/686/EEC;
diisocyanate and o-(p-isocyanatobenzyl)		(b) is marked visibly, legibly and indelibly as follows, and without prejudice to other
phenyl isocyanate		Community legislation concerning the classification, packaging and labelling of substances
		"— Persons already sensitised to diisocyanates may develop allergic reactions when using
		this product.
		dermal contact, with this product.
		- This product should not be used under conditions of poor ventilation unless a protective
		mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.
· 4,4'-methylenediphenyl diisocyanate	Methylenediphenyl diisocyanate (MDI) including the following specific isomers: 4 4'-	1. Shall not be placed on the market after 27 December 2010, as a constituent of mixtures in concentrations equal to or greater than 0.1 % by weight of MDI for supply to the general
	Methylenediphenyl diisocyanate; 2,4'-	public, unless suppliers shall ensure before the placing on the market that the packaging:
	Methylenediphenyl diisocyanate; 2,2'-	(a) contains protective gloves which comply with the requirements of Council Directive
		(b) is marked visibly, legibly and indelibly as follows, and without prejudice to other
		Community legislation concerning the classification, packaging and labelling of substances
		and mixtures: "— Persons already sensitised to diisocyanates may develop allergic reactions when using
		this product.
		<ul> <li>Persons suffering from asthma, eczema or skin problems should avoid contact, including domail contact, with this product.</li> </ul>
		<ul> <li>This product should not be used under conditions of poor ventilation unless a protective</li> </ul>
		mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.
		2. ву way of derogation, paragraph 1(a) shall not apply to hot melt adhesives.
National legislation Belgium		
MEGAPLAST PU 90S prepolyme	<u>r</u>	
No data available		
National legislation The Netherland	ds	
MEGAPLAST PU 90S prepolyme	<u> </u>	
Waterbezwaarlijkheid	B (4); Algemene Beoordelingsmethodie	k (ABM)
National legislation France		
MEGAPLAST PU 90S prepolyme	<u>r</u>	
No data available		
4,4'-methylenediphenyl diisocya	anate	
Catégorie cancérogène	[4,4'-Diisocyanate de diphénylméthane;	C2
Reason for revision: 3.2		Publication date: 2006-02-01
		Date of revision: 2019-04-15
Revision number: 0303		Product number: 35068 18 / 20

### National legislation Germany

IVIEGAPLAST PO 905 preporymen							
WGK	1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017						
polymethylene polyphenyl isocyanate							
TA-Luft	5.2.5/I						
TRGS900 - Risiko der	pMDI (als MDI berechnet); Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des						
Fruchtschädigung	biologischen Grenzwertes nicht befürchtet zu werden						
Sensibilisierende Stoffe	pMDI (als MDI berechnet); Sa; Atemwegssensibilisierende Stoffe						
TRGS905 - Krebserzeugend	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); 2						
TRGS905 - Erbgutverändernd	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -						
TRGS905 -	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -						
Fruchtbarkeitsgefährdend							
TRGS905 - Fruchtschädigend	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -						
Hautresorptive Stoffe	pMDI (als MDI berechnet); H; Hautresorptiv						
4,4'-methylenediphenyl diisocyan	ate, oligomers						
TA-Luft	5.2.5/I						
4,4'-methylenediphenyl diisocyan	ate						
TA-Luft	5.2.5/I						
TRGS900 - Risiko der	4,4'-Methylendiphenyldiisocyanat; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes						
Fruchtschädigung	und des biologischen Grenzwertes nicht befürchtet zu werden						
Sensibilisierende Stoffe	4,4'-Methylendiphenyldiisocyanat; Sah; Atemwegssensibilisierende Stoffe Und Hautsensibilisierende Stoffe, an beiden						
	Zielorganen Allergien auslösende						
Hautresorptive Stoffe	4,4'-Methylendiphenyldiisocyanat; H; Hautresorptiv						
Talc (Mg3H2(SiO3)4)							
TA-Luft	5.2.1						

### National legislation United Kingdom MEGAPLAST PU 90S prepolymer

No data available

p	olymethylene polyphenyl isocyanate								
	Skin Sensitisation	lsocyanates, all (as -NCO) Except methyl isocyanate; Sen							
	Respiratory sensitisation	lsocyanates, all (as -NCO) Except methyl isocyanate; Sen							
4	1,4'-methylenediphenyl diisocyanate								
	Skin Sensitisation	lsocyanates, all (as -NCO) Except methyl isocyanate; Sen							
Respiratory sensitisation Isocyanates, all (as -NCO) Except methyl isocyanate; Sen									

Other relevant data MEGAPLAST PU 90S prepolymer

No data available

olymethylene polyphenyl isocyanate							
IARC - classification	3; Polymethylene polyphenyl isocyanate						
4,4'-methylenediphenyl diisocyana	I,4'-methylenediphenyl diisocyanate						
IARC - classification	3; 4,4'-methylenediphenyl diisocyanate and polymeric 4,4'-methylenediphenyl diisocyanate						
<u>Talc (Mg3H2(SiO3)4)</u>	Falc (Mg3H2(SiO3)4)						
IARC - classification	3; Talc						
TLV - Carcinogen	Talc (containing no asbestos fibers); A4						

#### 15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

### **SECTION 16: Other information**

Full text of any	H-statements	referred to	under hear	ling 3.
I UII LEAL UI AII	v n-statenients	i elelleu lu	unuel neau	

- 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.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs (respiratory system) through prolonged or repeated exposure if inhaled.
- H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
- H373 May cause damage to organs (lungs) through prolonged or repeated exposure if inhaled.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate

Reason for revision: 3.2

Publication date: 2006-02-01 Date of revision: 2019-04-15

LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

#### Specific concentration limits CLP

polymethylene polyphenyl isocyanate	C ≥ 0.1 %	Resp. Sens. 1; H334	analogous to Annex VI
	C ≥ 5 %	Skin Irrit. 2; H315	analogous to Annex VI
	C ≥ 5 %	Eye Irrit. 2; H319	analogous to Annex VI
	C ≥ 5 %	STOT SE 3; H335	analogous to Annex VI
4,4'-methylenediphenyl diisocyanate	C ≥ 5%	Eye Irrit. 2; H319	CLP Annex VI (ATP 0)
	C ≥ 5 %	Skin Irrit. 2; H315	CLP Annex VI (ATP 0)
	C ≥ 5 %	STOT SE 3; H335	CLP Annex VI (ATP 0)
reaction mass of 4,4'-methylenediphenyl diisocyanate and o- (p-isocyanatobenzyl)phenyl isocyanate	C ≥ 5 %	STOT SE 3; H335	ECHA
	C ≥ 0.1 %	Resp. Sens. 1; H334	ECHA

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