# ORAC DecoFix Extra

# SAFETY DATA SHEET

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





#### **ORAC** nv/sa

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MADE IN EU

PI502 - 10/2018

#### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE **COMPANY/UNDERTAKING**

#### 1.1. Product identifier

Product name: Orac Decofix Extra Registration number REAC: Not applicable (mixture) Product type REACH: 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. Company/undertaking identification

ORAC nv, Biekorfstraat 32, 8400 Ostend, Belgium T +32 (0)59 80 32 52 - F +32 (0)59 80 28 10 info@oracdecor.com - www.oracdecor.com

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

ORAC nv, Biekorfstraat 32, 8400 Ostend, Belgium T +32 (0)59 80 32 52 - info@oracdecor.com

#### 1.5. Emergency telephone number

T +32 (0)59 80 32 52 (ORAC)

# 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance

dangerous acc	cording to the criteria of Regulation (EC) No 1272/2008
Category	Hazard statements
category 2	H351: Suspected of causing cancer.
category 4	H332: Harmful if inhaled.
category 2	H373: May cause damage to organs through prolonged
	or repeated exposure if inhaled.
category 2	H319: Causes serious eye irritation.
category 3	H335: May cause respiratory irritation.
category 2	H315: Causes skin irritation.
category 1	H334: May cause allergy or asthma symptoms or
	breathing difficulties if inhaled.
category 1	H317: May cause an allergic skin reaction.
	dangerous acc Category category 2 category 4 category 2 category 2 category 3 category 2 category 1

# 2.2. Label elements

Contains: 4,4'-methylenediphenyl diisocyanate; o-(p-isocyanatobenzyl)phenyl socyanate; aromatic polyisocyanate prepolymer. gnal word: Danger

#### -statements

Suspected of causing cancer.

larmful if inhaled.

May cause damage to organs through prolonged or repeated exposure if inhaled.

- Causes serious eye irritation.
- May cause respiratory irritation.
- Causes skin irritation.

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

May cause an allergic skin reaction.

#### P-statements

H351

H332

H373

H317

- P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children.
- 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.
- P302 + P352 IF ON SKIN: Wash with plenty of water and soap.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312
  - Call a POISON CENTER/doctor if you feel unwell.
- P501 Dispose of contents/container in accordance with local/regional national/international regulation.

#### Supplemental information

- Persons already sensitised to diisocyanates may develop allergic reactions when using this product. - Persons suffering from asthma, eczema or skin problems should avoid contact, including 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.

#### 2.3. Other hazards

No other hazards known

#### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name/REACH Registration No

	i nogisti attori n	0		
4,4'-methyle	nediphenyl diiso	<u> 01-2119457 ocyanate</u> / <u>01-2119457</u>	7014-47	
CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
101-68-8 202-966-0	10% <c<20%< td=""><td>Carc. 2; H351 Acute Tox. 4; H332 STOT RE 2; H373 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Resp. Sens. 1; H317</td><td>(1)(2)(8)(10)</td><td>Constituent</td></c<20%<>	Carc. 2; H351 Acute Tox. 4; H332 STOT RE 2; H373 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Resp. Sens. 1; H317	(1)(2)(8)(10)	Constituent

#### o-(p-isocyanatobenzyl)phenyl isocyanate / 01-2119480143-45 5873-54-1 10%<C<20% Carc. 2; H351 (1)(2)(8)(10)

227-534-9 Acute Tox. 4: H332 STOT RE 2; H373 Eve Irrit. 2; H319 STOT SE 3: H335 Skin Irrit. 2; H315 Resp. Sens. 1: H334 Skin Sens. 1; H317

#### aromatic polyisocyanate prepolymer

99784-49-3 C>50 % Acute Tox. 4; H332 (1)(10)STOT RE 2; H373 Eve Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Resp. Sens. 1; H334 Skin Sens. 1; H317

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

- (2) Substance with a Community workplace exposure lim
- (8) Specific concentration limits, see heading 16
- (10) Subject to restrictions of Annex XVII of Regulation

#### 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 anest: perform resuscitation. Victim conscious with aboured 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 ctim'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. Take victim to a doctor if irritation persists.

- After eye contact:

Rinse immediately with plenty of water. Do not apply neutralizing agents.

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. Consult a doctor/medical service if you feel ill.

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

4.2.1 Acute symptoms

- After inhalation:

Dry/sore throat. Coughing. Runny nose. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

- After skin contact:

Tingling/irritation of the skin.

- After eye contact:

Irritation of the eve tissue.

- After indestion:

Irritation of the gastric/intestinal mucosa.

# 4.2.2 Delayed symptoms

No effects known.

Constituent

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

needed will be listed If applicable and availa

# 5. FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing media

5.1.1 Suitable extinguishing media: Polyvalent foam. BC powder, Carbon

- dioxide. MAJOR FIRE: Water sprav.
- 5.1.2 Unsuitable extinguishing media:
- to unsuitable extinguishing media known.

# 2. Special hazards arising from the substance or mixture

On burning: retease of texic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide). Reacts slowly with water (moisture): release of carbon dioxide.

#### 5.3. Advice for firefighters

5.3.1 Instruction

Dilute to with water spray. Take account of toxic/corrosive precipitation

5.3.2 Special protective equipment for fire-fighters:

Gloves Safety glasses. Protective clothing. Heat/fire exposure: compressed air/ oxygen apparatus.

# 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. Safety glasses. Protective clothing. Suitable protective clothing See heading 8.2

#### 6.2. Environmental precautions

Contain leaking substance. Dam up the solid spill. Use appropriate containment to avoid environmental contamination. Prevent spreading in sewers.

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

Scoop solid spill into closing containers. Containers must not be sealed hermetically. Carefully collect the spill/leftovers. Clean (treat) contaminated surfaces

with acetone. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

#### 6.4. Reference to other sections

See heading 13.

#### 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. Observe very strict hygiene - avoid contact. Keep container tightly closed. Remove contaminated clothing immediately. Do not discharge the waste into the drain.

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

#### 7.2.1 Safe storage requirements:

Store in a dry area. Keep container in a well-ventilated place. Keep only in the original container. Meet the legal requirements. Max. storage time: 1 year(s). 7.2.2 Keep away from:

Heat sources, (strong) acids, (strong) bases, alcohols, amines, water/moisture. 7.2.3 Suitable packaging material: Polyethylene.

7.2.4 Non suitable packaging material: No data available

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

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

# 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.

#### the Netherlands

Difenylmethaan-4,4'-diisocyanaat

Time-weighted average exposure limit 8 h (Private occupational exposure limit value). 0.0048 ppm

Time-weighted average exposure limit 8 h (Private occupational exposure limit val 0.05 mg/m<sup>3</sup>

Short time value (Private occupational exposure limit value): 0.02 ppm Short time value (Private occupational exposure limit value): 0.21 mg/m<sup>3</sup>

#### <u>Belgium</u>

4,4<sup>-</sup>-Diisocyanate de diphénylméthane (MDI) Time-weighted average exposure limit 8 h: 0.005 ppm Time-weighted average exposure limit 8 h: 0.052 mg/rf

#### USA (TLV-ACGIH)

Methylene bisphenyl isocyanate (MDI) Time-weighted average exposure limit 8 h (TLV - Adopted Value): 0.005 ppr

#### <u>Germany</u>

4,4'-Methylendiphenyldiisocyanat Time-weighted average exposure limit 8 h (TRGS 900): 0.05 mg/m<sup>3</sup> o-(p-lsocyanatobenzyl)phenylisocyanat Time-weighted average exposure limit 8 h (TRGS 900): 0.05 mg/m<sup>3</sup>

#### <u>France</u>

4,4'-Diisocyanate de diphénylméthane Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative): 0.01 ppm

Time-weighted average exposure limit 8 h (VL. Valeur non réglementaire indicative): 0.1 mg/m<sup>3</sup>

Short time value (VL: Valeur non réglementaire indicative): 0.02 ppm Short time value (VL: Valeur non réglementaire indicative): 0.2 mg/m<sup>3</sup>

#### UK

Isocyanates, all (as -NCO) Except methyl isocyanate

Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005): 0.02 mg/m^3

Short time value (Workplace exposure limit (EH40/2005): 0.07 mg/m<sup>3</sup>

b) National biological limit values

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

nber
1
5
1
2

8.1.3 Applicable limit values when using the substance or mixture as intended If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values DNEL/DMEL - Workers	2	
4.4'-methylenediphenyl di Effect level (DNEL/DMEL) DNEL		Value 0.05 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup>
<u>o-(p-isocyanatobenzyl)phe</u> Effect level (DNEL/DMEL) DNEL	Type Long-term systemic effects inhalation Acute systemic effects inhalation Long-term local effects inhalation Acute local effects inhalation Acute systemic effects dermal	0.1 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup> 50 mg/kg bw/day
DNEL/DMEL - General pop	Acute local effects dermal ulation	28.7 mg/cm <sup>3</sup>
4.4'-methylenediphenyl dii Effect level (DNEL/DMEL) DNEL o-1p-isocyanatobenzyl)phe	Type Long-term local effects inhalation Acute systemic effects inhalation	Value 0.025 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup>
Effect level (DNEL/DMEL) DNEL		Value 0.025 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup> 0.025 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup> 25 mg/kg bw/day 17.2 mg/cm <sup>3</sup> 20 mg/kg bw/day
4,4'-methylenediphenyl di		
	Compartments Fresh water Marine water Aqua (intermittent releases) STP Soil	Value 1 mg/l 0.1 mg/l 10 mg/l 1 mg/l 1 mg/kg soil dw
o-(p-isocyanatobenzyl)phe		Value 1 mg/l 0.1 mg/l 10 mg/l 1 mg/l
	Soil	1 mg/kg soil dw

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. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection: Insufficient ventilation: wear respiratory protection.

b) Hand protection: Gloves. materials (good resistance) Polyethylene.

c) Eye protection: Safety glasses.

d) Skin protection: Protective clothing.

8.2.3 Environmental exposure controls: See headings 6.2, 6.3 and 13

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

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

Physical form Odour Odour threshold Colour Particle size Explosion limits Flammability Log Kow Dynamic viscosity Kinematic viscosity Melting point Boiling point Flash point Evaporation rate Relative vapour density Vapour pressure Solubility Relative density Decomposition temperature No data available Auto-ignition temperature

Paste Characteristic odour No data available Colourless No data available No data available Non-flammable Not applicable (mixture) No data available No data available No data available No data available > 165 °C No data available > 2 No data available water ; insoluble 11

No data available Explosive properties No chemical group assoc ith explosive Oxidising properties No chemical group associated with oxidising No data availa pН

9.2. Other information

Absolute density

#### **10. STABILITY AND REACTIVITY**

#### 10.1. Reactivity

No data available.

#### 10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions No data available.

#### 10.4. Conditions to avoid

Keep away from naked flames/heat.

#### 10.5. Incompatible materials

(strong) acids, (strong) bases, alcohols, amines, water/moisture.

#### 10.6. Hazardous decomposition products

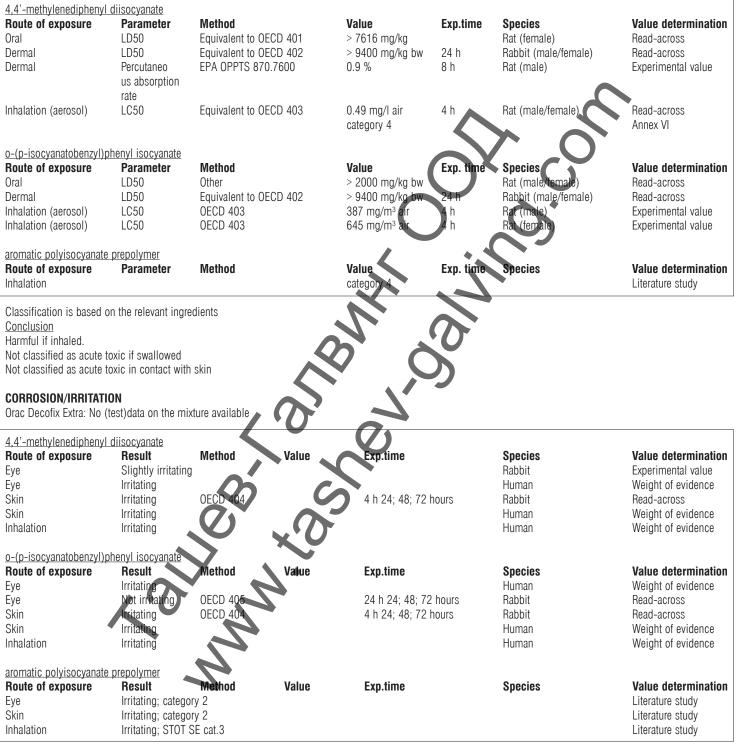
On burning: release of toxic and corrosive gases/ vapours (nitrous vapours, carbon monoxide - carbon dioxide) Reacts slowly with water (moisture): release of carbon dioxide.

#### **11. TOXICOLOGICAL INFORMATION**

#### 11.1. Information on toxicological effects

# 11.1.1 Test results ACUTE TOXICITY

Orac Decofix Extra: No (test)data on the mixture available



Classification is based on the relevant ingredients

<u>Conclusion</u>

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

Specific target organ toxicity, single exposure: classified as irritant to respiratory organs

#### **RESPIRATORY OR SKIN SENSITISATION**

Orac Decofix Extra No (test)data on the mixture available

Route of exposure	l diisocyanate Result	Method	Exp.time	Observation time poin	t Species	5	Value de	etermination
Skin	Sensitizing		······		Mouse			ental value
Inhalation	Sensitizing	5			Rat (mal	e)		ental value
Inhalation	Sensitizing					big (female)		
o-(p-isocyanatobenzyl)	phenyl isocyar	nate						
Route of exposure	Result	Method	Exp.time	Observation time poin				etermination
Skin	Not sensiti		OECD 406 12 h	24; 48 hours	Guinea p	oig (male/female		
Skin	Sensitizing				÷ .		Annex VI	
Inhalation	Sensitizing					pig(female)	Read-acr	
Inhalation	Sensitizing	ļ			Human (	(maie)	Weight o	f evidence
aromatic polyisocyanate						N.		
Route of exposure	Result	Method	Exp.time	Observation time poin	t Species			etermination
Skin		g, category 1					Literature	,
Inhalation	Sensitizing	g, category 1			$\frown$	7	Literature	study
SPECIFIC TARGET Orac Decofix Extra No (test)data on the mi			0					
4,4'-methylenedipheny	l diisocvanate							
		Method Valu	ie Organ	Effect Exp. 1	time	Species	Value de	etermination
	LOAEC		mg/m3 air Lungs	Lung tissue ≤ 104	weeks	Rat (female)	Experime	ental value
o (n isoovanatohanzul)	nhonyl iogovou			affection/degeneration (17h/c	lay, 5 days/we	ek)		
o-(p-isocyanatobenzyl) Route of exposure	Parameter	Method Valu	ie Organ	Effect Exp. 1	time	Species	Value de	etermination
•	NOAEC		mg/m <sup>3</sup> air Respiratory		r(s) (6h/day,	Rat (male/fema		Read-acros
aidtion (dorodon)		OECD 453	tract		s/week)			
Inhalation (aerosol)	LOAEC		g/m <sup>3</sup> air Respiratory		r(s) (6h/day,	Rat (male/fema	ale)	Read-acros
, , , , , , , , , , , , , , , , , , ,		0ECD 453	taci		s/week)		,	
	<u>e prepolymer</u>							eterminatio
aromatic polyisocyanate Route of exposure	e prepolymer Parameter	Method Valu		Effect Exp.	point	Species		
Route of exposure	e prepolymer Parameter	Method Valu Sto		Effect Exp.	point	Species	Literature	
Route of exposure Inhalation	Parameter	STO		Effect Exp.	point	Species		
Route of exposure Inhalation Classification is based Conclusion	Parameter on the relevant	STO t ingredients	RE Dat.2	Effect Exp.	point	Species		
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to c	Parameter on the relevant	STO t ingredients n prolonget or repeate	RE Dat.2	Effect Exp.	point	Species		
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to c Not classified as sub-cl	Parameter on the relevant organs through hronically toxic	STO t ingredients n prolonged or repeate c in contact with skin	RE Dat.2	Effect Exp.	point	Species		
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to c Not classified as sub-cl	Parameter on the relevant organs through hronically toxic	STO t ingredients n prolonged or repeate c in contact with skin	RE Dat.2	Effect Exp.	point	Species		
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to c Not classified as sub-cl Not classified as sub-cl	Parameter on the relevant organs through hronically toxic hronically toxic	STO t ingredients n prolonged or repeate c in contact with skin	RE Dat.2	Effect Exp.	point	Species		
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to c Not classified as sub-cl Not classified as sub-cl MUTAGENICITY (IN	Parameter on the relevant organs through hronically toxic hronically toxic	STO t ingredients n prolonged or repeate c in contact with skin	RE Dat.2	Effect Exp.	point	Species		
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to co Not classified as sub-cl Not classified as sub-cl MUTAGENICITY (IN Orac Decofix Extra	Parameter on the relevant organs through hronically toxic hronically toxic I VITRO)	STO t ingredients n prolonged or repeate c in contact with skin c if swallowed	RE Dat.2	Effect Exp.	point	Species		
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to co Not classified as sub-cl Not classified as sub-cl <b>MUTAGENICITY (IN</b> Orac Decofix Extra No (test)data on the min	Parameter on the relevant organs through hronically toxic hronically toxic I VITRO) xture available	STO t ingredients n prolonged or repeate c in contact with skin c if swallowed	RE Dat.2	Effect Exp.	point	Species		
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to conclusion Not classified as sub-cl Not classified as sub-cl MUTAGENICITY (IN Orac Decofix Extra No (test)data on the mini- 4.4'-methylenedipheny	Parameter on the relevant organs through hronically toxic hronically toxic I VITRO) xture available I diisocyanate	STO t ingredients n prolonged or repeate c in contact with skin c if swallowed	ed exposure if inhaled.				Literature	
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to o Not classified as sub-cl Not classified as sub-cl MUTAGENICITY (IN Orac Decofix Extra No (test)data on the mit <u>4.4'-methylenedipheny</u> Result	Parameter on the relevant organs through hronically toxic hronically toxic I VITRO) xture available I diisocyanate	STO t ingredients n prolonged or repeate c in contact with skin c if swallowed	ed exposure if inhaled. Test substrate	Effect	Value	determination	Literature	
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to of Not classified as sub-cl Not classified as sub-cl MUTAGENICITY (IN Orac Decofix Extra No (test)data on the mit <u>4,4'-methylenedipheny</u> Result Negative with metabolic	Parameter on the relevant organs through hronically toxic hronically toxic I VITRO) xture available I diisocyanate C Eq	STO t ingredients n prolonged or repeate c in contact with skin c if swallowed	ed exposure if inhaled. Test substrate	Effect	Value		Literature	
Route of exposure Inhalation Classification is based <u>Conclusion</u> May cause damage to o Not classified as sub-cl Not classified as sub-cl MUTAGENICITY (IN Orac Decofix Extra No (test)data on the mit <u>4.4'-methylenedipheny</u> Result	Parameter on the relevant organs through hronically toxic hronically toxic I VITRO) xture available I diisocyanate C Eq	STO t ingredients n prolonged or repeate c in contact with skin c if swallowed	ed exposure if inhaled. Test substrate	Effect	Value	determination	Literature	

ResultMethodJegative with metabolic0ECD 471activation, negative withoutnetabolic activation			: <b>substrate</b> eria (S.typhimurium)			e determination rimental value		
MUTAGENICITY ( Orac Decofix Extra No (test)data on the r								
<u>4.4'-methylenedipher</u> <b>Result</b> Negative	Me	<b>thod</b> uivalent to OECD	)471 3 we	. <b>time</b> eeks (1h/day ı/week)	<b>Test substrate</b> Rat (male)	Organ		Value determination Experimental value
<u>o-(p-isocyanatobenzy</u> <b>Result</b> Negative	Me	ate ethod CD 474	<b>Exp</b> . 3 we	, <b>time</b> eeks (1h/day ı/week)	<b>Test substrate</b> Rat (male)	Organ	0	Value determination Read-Across
CARCINOGENICIT Orac Decofix Extra	Y				$\sim$			
Route of exposure Inhalation	Parameter	Method	<b>Value</b> category 2	Exp.time	Species	Effect	Organ	Value determination Literature
4,4'-methylenedipher Route of exposure nhalation (aerosol)	n <u>yl diisocyanate</u> <b>Parameter</b> NOAEC	<b>Method</b> other	<b>Value</b> 0.7 mg/m³ ai	Exp.time r 104 week\$ (17h/d 5 days/week)	<b>Species</b> ay, Rat (female)	Effect No carcinogenic effect	Organ	Value determination Experimental value
<del>o-(p-isocyanatobenzy <b>Route of exposure</b> nhalation (aerosol) nhalation (aerosol)</del>	<u>rl)phenyl isocyar</u> Parameter NOAEC LOAEC	Method Equivalent to OECD 453	<b>Value</b> 1 mg/m <sup>3</sup> air 6 mg/m <sup>3</sup> air	Exp.time 2 years (6h/day, 5 days/week) 2 years (6h/day,	Species Rat (female/ male) Rat (female/	Effect No effect Tumor	<b>Organ</b> Respiratory tract Respiratory	Value determination Read-Across Read-Across
<b>REPRODUCTIVE</b> 1 Orac Decofix Extra No (test)data on the r	FOXICITY	OECD 453		days/week)	male)	formation	tract	
4,4'-methylenedipher Development	n <u>yl diisocyanate</u> <b>Parameter</b> NOAEL	Method OECD 414	<b>Value</b> 3 mg/m³ air	Exp.time 10 days,	<b>Species</b> Rat (female)	Effect No effect	Organ	Value determination Experimental value
toxicity	LOAEL	0ECD 414	9 mg/m³ air	(6h/day) 10 days,	Rat (female)	Embryotoxicity		Experimental value
Maternal toxicity	NOAEL	OECD 414	4 mg/kg bw//day	(6h/day) 10 days	Rat (female)	No effect		Read-Across
Effects on fertility	14	<b>)</b>	~					Data waiving
o-(p-isocyanatobenzy Route of exposure Development toxicity	<u>/I)phenyl isocyan</u> Parameter NOAEL	<u>iate</u> Method OECD 414	<b>Value</b> 4 mg/m³ air	<b>Exp.time</b> 10 days, (6h/day)	<b>Species</b> Rat	Effect No adverse systemic effects	Organ	Value determination Read-Across
Maternal toxicity	NOAEL	0ECD 414	4 mg/m³ air	10 days (6h/day)	Rat (female)	No adverse systemic effects		Read-Across

Classification is based on the relevant ingredients <u>Conclusion CMR</u> Suspected of causing cancer. Not classified for mutagenic or genotoxic toxicity Not classified for reprotoxic or developmental toxicity

#### **TOXICITY OTHER EFFECTS**

Orac Decofix Extra No (test)data on the mixture available

4.4'-methylenediphenyl diisocyanate Parameter LD50	Method	<b>Value</b> 100 mg/l	<b>Organ</b> kg bw	I	Effect	Exp.time	<b>Species</b> mouse (male	<b>Value determination</b> e) Experimental value
CHRONIC EFFECTS FROM SHO Drac Decofix Extra DN CONTINUOUS/REPEATED EXPOSU Respiratory difficulties.				nation. Fee	ling of weakness.	Coughing. Possi	ble inflammation of	f the respiratory tract.
12. ECOLOGICAL INFORMATION	I							
2.1. Toxicity								
<u>Drac Decofix Extra</u> No (test)data on the mixture available						$\mathbf{\wedge}$		
1,4'-methylenediphenyl diisocyanate								
	Parameter		Value	Duration	Species	Test design	Fresh/salt wate	r Value determination
cute toxicity fishes	LC50	0ECD 203	> 1000 mg/l	96 h	Danio rerio	Static system	Fresh water	Read-across; Nomina concentration
cute toxicity invertebrates	EC50	0ECD 202	129.7 mg/l	24 h	Daphnia magna	Static system	Fresh water	Read-across;
oxicity algae and other aquatic plants	EC50	0ECD 201	> 1640 mg/l	72 h	Desmodesmus	Static system-	resh water	Locomotor effect Read-across; Growth
ong-term toxicity aquatic invertebrate		0ECD 211	> 10 mg/l	21 day(s)	subspicatus Daphnia magna			rate Read-across;
0 9 1			-					Reproduction
oxicity aquatic micro-organisms	EC50	0ECD 209	> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Read-across; Nomina concentration
-(p-isocyanatobenzyl)phenyl isocyana		Mathad	Value	Destation	Canadian (	Tool dooinn	Erech /colturator	
Acute toxicity fishes	Parameter LC50	OECD 203	Value > 1000 mg/	Duration 96 h	Species Brachydanio rerio	Test design Static system	Fresh/saltwater Fresh water	Value determination Read-across; Nomina
Acute toxicity invertebrates	EC50	0FCD 202	> 1000 mg/l	24 h	Daphnia magna	Static system	Fresh water	concentration Read-across; Nomina
-				•		,		concentration
oxicity algae and other aquatic plants	EC50	OECD 201	> 1640-mg/l	72 h	Scenedesmus subspicatus	Static system F	resh water	Read-across; GLP
ong-term toxicity aquatic invertebrate	s NOEC	0ECD 211	≥ 10 mg/l	21 day(s)	Daphnia magna	Semi-static sys	tem Fresh water	Read-across; Nomina concentration
oxicity aquatic micro-organisms	EC50	0ECD 209	> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Read-across; GLP
	Parameter	Method	C	Value		Duration	Species	Value determination
oxicity soil macro-organisms	NOEC	OECD 207	0 0ECD 208		ng/kg soil dw	14 day(s)	Eisenia fetida	Read-across
oxicity terrestrial plants			0 0ECD 208	≥ 1000 m ≥ 1000 m	ng/kg soil dw ng/kg soil dw	14 day(s) 14 day(s)	Avena sativa Lactuca sativa	Read-across Read-across
ludgement is based on the relevant in	aredients							
Conclusion: Not classified as dangerou		ironment acc	cording to the	criteria of F	Regulation (EC) No	1272/2008		
2.2. Persistence and degradability		~						
4,4'-methylenediphenyl diisocyanate		1			<b>.</b>			, , ,
Biodegradation water	Method OECD 3020			<b>Value</b> O	Duration 28 day(s)			Value determination Read-across
Phototransformation air (DT50 air)	Method AOPWIN v1	02		Value 0.92 day(	Conc. OH-	radicals		<b>Value determination</b> QSAR
	Method	.JL		Value	, ,	egradation/min	eralisation	lalue determination
lalf-life water (t1/2 water)	20 h						F	Read-across
-(p-isocyanatobenzyl)phenyl isocyana				Volue	D			
iodegradation water	Method OECD 3020	)		<b>Value</b> O	Duration 28 day(s)			Value determination Read-across
Phototransformation air (DT50 air)	<b>Method</b> AOPWIN v1	92		Value	<b>Conc. OH</b> s); GLP 1500000			Value determination Experimental value
	Method	.02		Value		egradation/mir	eralisation	alue determination
lalf-life water (t1/2 water)	20 h; GLP						F	Read-across

<u>Conclusion</u>: Contains non readily biodegradable component(s)

#### 12.3. Bioaccumulative potential

Orac Decofix Extra Log Kow Remark: Not applicable (mixture)

#### 4,4'-methylenediphenyl diisocyanate

- BCF fishes Parameter: BCF - Method: OECD 305 - Value: 92-200 - Duration: 4 week(s) Species: Cyprinus carpio - Value determination: Experimental value - Loa Kow Method: OECD 117 - Value: 5.22/4.51 - Temperature: 22 °C - Value determination: Estimated value/Experimental value

#### o-(p-isocyanatobenzyl)phenyl isocyanate

- BCF fishes Parameter: BCF - Method: OECD 305 - Value: 92-200 - Duration: 28 days -Species: Cyprinus carpio - Value determination: Read-across - Log Kow Method: OECD 117 - Value: 4.51 - Temperature: 22 °C - Value determination: conclusion by analogy.

aromatic polyisocyanate prepolymer - Loa Kow Remark: No data available Conclusion: Contains bioaccumulative component(s)

#### 12.4. Mobility in soil

4,4'-methylenediphenyl diisocyanate Volatility (Henry's Law constant H) Value: 8.95E-7 atm m3/mol - Temperature: 25 °C - Value determination: Estimated value

Conclusion: No (test)data on mobility of the components available

#### 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

Orac Decofix Extra - Global warming potential (GWP) None of the known components is included in the fluorinated greent list d gases (Regulation (EU) No 517/2014) - Ozone-depleting potential (ODP) Not classified as dangerous for the ozone layer equiation (EC)

#### **13. DISPOSAL CONSIDERATIONS**

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

#### 13.1. Waste treatment methods

13.1.1 Provisions relating to waste

Hazardous waste according to Regulation (EU) No 1357/2014. Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC). 08 04 09\* (wastes from MFSU of adhesives and sealants (including waterproofing

products): waste adhesives and sealants containing organic solvents or other hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

#### 13.1.2 Disposal methods

Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. 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.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC). 15 01 10\* (packaging containing residues of or contaminated by dangerous substances).

#### **14. TRANSPORT INFORMATION**

Road (ADR)

14.1. UN number Transport :Not subject

#### 14.2. UN proper shipping name

14.3. Transport hazard class(es) Hazard identification n

Class: Classif

14.4. Packing group Packing group

Labels: 14.5. Environmental hazards

Environmentally hazardous substance mark: no

#### 14.6. Special precautions for user Special provision

Limited quantit

Rail (Rl 14.1. UN numbe

Transport: Not subject

# 4.2. UN proper shipping name

4.3. 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:

#### Inland waterways (ADN)

14.1. UN number Transport: Not subject

#### 14.2. UN proper shipping name

# 14.3. Transport hazard class(es)

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:

#### Sea (IMDG/IMSBC)

**14.1. UN number** Transport: Not subject

#### 14.2. UN proper shipping name

#### 14.3. Transport hazard class(es) Class:

14.4. Packing group

Packing group: Labels:

14.5. Environmental hazards Marine pollutant: 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

#### Air (ICAO-TI/IATA-DGR)

**14.1. UN number** Transport: Not subject

#### 14.2. UN proper shipping name

#### 14.3. Transport hazard class(es) Class

**14.4. Packing group** Packing group:

Labels:

# 14.5. Environmental hazards

Environmentally hazardous substance mark: no

# 14.6. Special precautions for user

Special provision:s Passenger and cargo transport: limited quantities: maximum net quantity per packaging

Rer

#### **15. REGULATORY INFORMATION**

# 15.1. Safety, health and environmental regulations/legislation specific f the substance or mixture

European legislation:

VOC content Directive 2010/75/EU

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VOC content
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0 %

0 g/l

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.

#### aromatic polyisocyanate prepolymer

Designation of the substance, of the group of substances or of the mixture: Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:

(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;

(b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;

(c) hazard class 4.1;

(d) hazard class 5.1.

Conditions of restriction:

1. Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,

- tricks and jokes,

 games for one or more participants, or any article intended to be used as such, even with ornamental aspects,2. Articles not complying with paragraph 1 shall not be placed on the market.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:
 can be used as fuel in decorative oil lamps for supply to the general public, and,

- present an aspiration hazard and are labelled with R65 or H304,4. 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 of tamps (EN 14059) adopted by the European Committee for Standardisation (CEN).5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or 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 R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sig of grill lighter may lead to his threatening lung damage'; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are legibled with R65 or H304, intended for supply to the general public are legibled with R65 or H304, intended for supply to the general public are legibled with R65 or H304, intended for supply to the general public are legibled with R65 or H304, intended for supply to the general public are legibled. packaged in black opaque containers not exceeding 1 litre by 1 December 2010.6. 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, it appropriate, grill lighter fluids and fuel for decorative lamps. labelled R65 or H304, intended for supply to the general public.7. Natural or legal persons plasing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'

4'-methylenediphenyl diisocyanate

**G**-(p-isocyanatobenzyl)phenyl isocyanate Designation of the substance, of the group of substances or of the mixture: Methylenediphenyl diisocyanate (MDI) including the following specific isomers: 4,4'-Methylenediphenyl diisocyanate; 2,4'-Methylenediphenyl diisocyanate; 2,2'-Methylenediphenyl diisocyanate

#### Conditions of restriction:

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 public, unless suppliers shall ensure before the placing on the market that the packaging:

(a) contains protective gloves which comply with the requirements of Council Directive 89/686/EEC;

(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:

 $\ensuremath{^{\circ}}$  - Persons already sensitised to diisocyanates may develop allergic reactions when using this product.

- Persons suffering from asthma, eczema or skin problems should avoid contact, including 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.2. By way of derogation, paragraph 1(a) shall not apply to hot melt adhesives.

#### National legislation The Netherlands

Waste identification (the Netherlands) LWCA (the Netherlands): KGA category 03 Waterbezwaarlijkheid: 10

National legislation Germany

- Orac Decofix Extra WGK 1; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

- 4,4'-methylenediphenyl diisocyanate
MAK - Krebserzeugend Kategorie:4
Schwangerschaft Gruppe: C
MAK 8-Stunden-Mittelwert mg/m<sup>3</sup>:
Diphenylmethan-4,4'-diisocyanat (MDI) (einatembare Fraktion); 0.05 mg/m<sup>3</sup>;
gemessen als einatembare Fraktion (vgl. Abschn. Vd) S. 191)
TA-Luft: 5.2.5; I 5.2.5

- o-(p-isocyanatobenzyl)phenyl isocyanate TA-Luft 5.2.5; I 5.2.5

National legislation France - Orac Decofix Extra No data available - 4,4'-methylenediphenyl diisocyanate Catégorie cancérogène C2

National legislation Belgium - Orac Decofix Extra No data available

Other relevant data - Orac Decofix Extra No data available - 4,4'-methylenediphenyl diisocyanate IARC-classification 3; 4,4'-methylenediphenyl diisocyanate 4,4'-methylenediphenyl diisocyanate

Oliver and

#### 15.2. Chemical safety assessment

No chemical safety assessment is required.

polymeric

and