

SAFETY DATA SHEET

Based upon Regulation (EC) No. 1907/2006, as amended by Regulation (EC) No. 453/2010

Orac Decor® DecoFix Extra

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

1.1 Product identifier:

Product name : Orac Decofix Extra
 Registration number REACH : 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 Details of the supplier of the safety data sheet:

Supplier of the safety data sheet

ORAC N.V.
 Biekorfstraat 32
 B-8400 Ostend
 Tel: +32 59 80 32 52
 info@oracdecor.com
 www.oracdecor.com

Manufacturer of the product

ORAC N.V.
 Biekorfstraat 32
 B-8400 Ostend
 Tel: +32 59 80 32 52
 info@oracdecor.com
 www.oracdecor.com

1.4 Emergency telephone number:

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation EC No 1272/2008

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.
STOT RE	category 2	H373: May cause damage to organs through prolonged or repeated exposure if inhaled.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H335: May cause respiratory irritation.
Skin Irrit.	category 2	H315: Causes skin irritation.
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.

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC

Carc. Cat. 3; R40 - Limited evidence of a carcinogenic effect

Xn; R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Xi; R36/37/38 - Irritating to eyes, respiratory system and skin.

R42/43 - May cause sensitisation by inhalation and skin contact.

2.2 Label elements:

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)
 Technische Schoolstraat 43 A, B-2440 Geel
<http://www.big.be>
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Product number: 38899

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Labelling according to Regulation EC No 1272/2008 (CLP)



Contains 4,4'-methylenediphenyl diisocyanate.

H-statements

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

P-statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves and eye protection/face protection.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing.
P309 + P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P501	Dispose of contents/container to manufacturer/competent authority.

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 type A1 according to standard EN 14387) is used.

Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Labels



Harmful

Contains: 4,4'-methylenediphenyl diisocyanate.

R-phrases

36/37/38	Irritating to eyes, respiratory system and skin
40	Limited evidence of a carcinogenic effect
42/43	May cause sensitisation by inhalation and skin contact
48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation

S-phrases

(02)	(Keep out of the reach of children)
23	Do not breathe vapour
36/37	Wear suitable protective clothing and gloves
45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
(63)	(In case of accident by inhalation: remove casualty to fresh air and keep at rest)

Additional recommendations

Contains isocyanates. See information supplied by the manufacturer.

- 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 type A1 according to standard EN 14387) is used.

2.3 Other hazards:

CLP

No other hazards known

DSD/DPD

No other hazards known

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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 DSD/DPD	Classification according to CLP	Note	Remark
4,4'-methylenediphenyl diisocyanate (01-2119457014-47)	101-68-8 202-966-0	10%<C<25%	Carc. Cat. 3; R40 Xn; R20 - 48/20 Xi; R36/37/38 R42/43	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; H334 Skin Sens. 1; H317	(1)(2)(8)(10)	Constituent

- (1) For R-phrases and 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

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. 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 unwell.

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 eye tissue.

After ingestion:

Irritation of the gastric/intestinal mucosa.

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:

Polyvalent foam. BC powder. Carbon dioxide. Water spray.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2 Special hazards arising from the substance or mixture:

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On burning: release of toxic 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 Instructions:

Dilute toxic gases with water spray.

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 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.

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. 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.

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.

The Netherlands

Difenylnmethaan-4,4'-diisocyanaat	Short time value	0.02 ppm 0.21 mg/m ³	Private occupational exposure limit value
	Time-weighted average exposure limit 8 h	0.0048 ppm 0.05 mg/m ³	Private occupational exposure limit value

Belgium

4,4'-Diisocyanate de diphenylméthane (MDI)	Time-weighted average exposure limit 8 h	0.005 ppm 0.052 mg/m ³	
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USA (TLV-ACGIH)

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

4,4'-Methylendiphenyldiisocyanat	Time-weighted average exposure limit 8 h	0.05 mg/m ³	TRGS 900
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France

4,4'-Diisocyanate de diphénylméthane	Short time value	0.02(5 min) ppm 0.2(5 min) mg/m ³	VL: Valeur non réglementaire indicative
	Time-weighted average exposure limit 8 h	0.01 ppm 0.1 mg/m ³	VL: Valeur non réglementaire indicative

UK

Isocyanates, all (as -NCO) Except methyl isocyanate	Short time value	0.07 mg/m ³	Workplace exposure limit (EH40/2005)
	Time-weighted average exposure limit 8 h	0.02 mg/m ³	Workplace exposure limit (EH40/2005)

Portugal

Metilendifenilisocianato (MDI)	Time-weighted average exposure limit 8 h	0,005 ppm	
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b) National biological limit values

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

8.1.2 Sampling methods

Product name	Test	Number
4,4-Methylene Bisphenyl Isocyanate (MDI) (Isocyanates)	NIOSH	5521
4,4'-Methylenebis(phenylisocyanate)	NIOSH	5525
Isocyanates	NIOSH	5521
Methylene Bisphenyl Isocyanate	OSHA	47

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 - Workers

4,4'-methylenediphenyl diisocyanate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects dermal	50 mg/kg bw/day	
	Acute systemic effects inhalation	0.1 mg/m ³	
	Acute local effects dermal	28.7 mg/cm ²	
	Acute local effects inhalation	0.1 mg/m ³	
	Long-term systemic effects inhalation	0.05 mg/m ³	
	Long-term local effects inhalation	0.05 mg/m ³	

DNEL - General population

4,4'-methylenediphenyl diisocyanate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects dermal	25 mg/kg bw/day	
	Acute systemic effects inhalation	0.05 mg/m ³	
	Acute -systemic effects oral	20 mg/kg bw/day	
	Acute local effects dermal	17.2 mg/cm ²	
	Acute local effects inhalation	0.05 mg/m ³	
	Long-term systemic effects inhalation	0.025 mg/m ³	
	Long-term local effects inhalation	0.025 mg/m ³	

PNEC

4,4'-methylenediphenyl diisocyanate

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	

8.1.5 Control banding

If applicable and available it will be listed below.

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8.2 Exposure controls:

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex 1. 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 for protective clothing (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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical form	Paste
Odour	Characteristic odour
Odour threshold	No data available
Colour	Colourless
Particle size	No data available
Explosion limits	No data available
Flammability	Insufficient data available on direct fire hazard (flashpoint > 60°C)
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Flash point	> 165 °C
Evaporation rate	No data available
Vapour pressure	No data available
Relative vapour density	> 2
Solubility	water ; insoluble
Relative density	1.1
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

Physical hazards

No physical hazard class

9.2 Other information:

Absolute density	1146 kg/m ³
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SECTION 10: Stability and reactivity

10.1 Reactivity:

No data available.

10.2 Chemical stability:

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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.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

11.1.1 Test results

Acute toxicity

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No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination
Oral	LD50	Other	>2000 mg/kg bw		Rat	Male/female	Read-across
Dermal	LD50	Equivalent to OECD 402	>9400 mg/kg bw	24 h	Rabbit	Male/female	Read-across
Inhalation (aerosol)	LC50	OECD 403	>2.24 mg/l	1 h	Rat	Male/female	Experimental value

Classification of the mixture is based on the relevant ingredients of the mixture

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Orac Decofix Extra

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination
Eye	Irritating				Human	Weight of evidence
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

Classification of the mixture is based on the relevant ingredients of the mixture

Conclusion

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

4,4'-methylenediphenyl diisocyanate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Gender	Value determination
Skin	Sensitizing						Literature study
Inhalation	Sensitizing				Guinea pig	Female	Experimental value
Inhalation	Sensitizing	Other			Rat	Male	Experimental value

Classification of the mixture is based on the relevant ingredients of the mixture

Conclusion

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

May cause an allergic skin reaction.

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Specific target organ toxicity

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No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Gender	Value determination
Inhalation (aerosol)	NOAEC	Equivalent to OECD 453	0.2 mg/m ³		No effect	104 weeks (6h/day, 5 days/week)	Rat	Male/female	Read-across
Inhalation (aerosol)	LOAEC	Equivalent to OECD 453	1 mg/m ³	Respiratory tract		104 weeks (6h/day, 5 days/week)	Rat	Male/female	Read-across

Classification of the mixture is based on the relevant ingredients of the mixture

Conclusion

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

Mutagenicity (in vitro)

Orac Decofix Extra

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value

Mutagenicity (in vivo)

Orac Decofix Extra

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Result	Method	Exposure time	Test substrate	Gender	Organ	Value determination
Negative	OECD 474	3 h	Rat	Male		Experimental value

Carcinogenicity

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Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination	Organ	Effect
Inhalation			category 2				Literature		

4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination	Organ	Effect
Inhalation (aerosol)	NOAEC	Equivalent to OECD 453	1 mg/m ³	104 weeks (6h/day, 5 days/week)	Rat	Male/female	Read-across		No effect
Inhalation (aerosol)	LOAEL	Equivalent to OECD 453	6 mg/m ³	104 weeks (6h/day, 5 days/week)	Rat	Male/female	Read-across	Respiratory tract	

Reproductive toxicity

Orac Decofix Extra

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

	Parameter	Method	Value	Exposure time	Species	Gender	Effect	Organ	Value determination
Developmental toxicity	NOAEL (P)	OECD 414	4 mg/m ³	10 days (6h/day)	Rat	Female	Maternal toxicity		Read-across
	NOAEL (F1)	OECD 414	4 mg/m ³	10 days (6h/day)	Rat	Female	Teratogenicity		Read-across

Classification of the mixture is based on the relevant ingredients of the mixture

Conclusion CMR

Suspected of causing cancer.

Not classified for mutagenic or genotoxic toxicity

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

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No (test)data on the mixture available

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Chronic effects from short and long-term exposure

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ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Itching. Skin rash/inflammation. Feeling of weakness. Coughing. Possible inflammation of the respiratory tract. Respiratory difficulties.

11.1.2 Other information

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EC carc cat	3
CLP carc cat	category 2

4,4'-methylenediphenyl diisocyanate

EC carc cat	3
CLP carc cat	category 2
Catégorie cancérogène	C2
IARC - coderr	IARC1015
IARC - classification	3
IARC group	3
MAK - Krebs erzeugend Kategorie	4

SECTION 12: Ecological information

12.1 Toxicity:

Orac Decofix Extra

No (test) data on the mixture available

4,4'-methylenediphenyl diisocyanate

	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 invertebrates	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 invertebrates	NOEC	OECD 211	>=10 mg/l	21 day(s)	Daphnia magna	Semi-static	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

Classification of the mixture is based on the relevant ingredients of the mixture

Conclusion

Not classified for acute aquatic toxicity

12.2 Persistence and degradability:

4,4'-methylenediphenyl diisocyanate

Biodegradation water

Method	Value	Duration	Value determination
OECD 302C: Inherent Biodegradability: Modified MITI Test (II)	0 %	28 day(s)	Read-across

Conclusion

Contains non readily biodegradable component(s)

12.3 Bioaccumulative potential:

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

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4,4'-methylenediphenyl diisocyanate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	92 - 200	4 week(s)	Cyprinus carpio	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
		5.22		Estimated value

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

12.4 Mobility in soil:

4,4'-methylenediphenyl diisocyanate

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
8.95E-7 atm m ³ /mol		25 °C		Estimated value

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

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 Annex XIII of Regulation (EC) No 1907/2006.

12.6 Other adverse effects:

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Global warming potential (GWP)

None of the known components is included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No. 1272/2008 and 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 13. Always use the relevant exposure scenarios that correspond to your identified use.

13.1 Waste treatment methods:

13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, decision 2000/0532/EC).

08 04 09* (waste adhesives and sealants containing organic solvents or other dangerous substances). Depending on branch of industry and production process, also other EURAL 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).

SECTION 14: Transport information

Road (ADR)

14.1 UN number:

Transport	Not subject
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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
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14.6 Special precautions for user:

Special provisions	
Limited quantities	

Rail (RID)

14.1 UN number:

Transport	Not subject
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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
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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
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14.6 Special precautions for user:

Special provisions	
Limited quantities	

Sea (IMDG)

14.1 UN number:

Transport	Not subject
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14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Class	
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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 73/78 and the IBC Code:

Annex II of MARPOL 73/78	
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Air (ICAO-TI/IAT A-DGR)

14.1 UN number:

Transport	Not subject
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14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Class	
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14.4 Packing group:

Packing group	
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Labels	
14.5 Environmental hazards:	
Environmentally hazardous substance mark	no
14.6 Special precautions for user:	
Special provisions	
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	

SECTION 15: Regulatory information

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

European legislation:

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 substances or of the mixture	Conditions of restriction
4,4'-methylenediphenyl diisocyanate	Methylenediphenyl diisocyanate (MDI)	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: " — 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.

Volatile organic compounds (VOC)

0 %

National legislation

- The Netherlands

Waterbezwaarlijkheid	11
Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 03

- Germany

WGK	1	Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)
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MAK (Germany)

Diphenylmethan-4,4'-diisocyanat (MDI) (einatembare Fraktion)	Time-weighted average exposure limit 8 h	0.05 mg/m ³ (E)	E: gemessen als einatembare Fraktion (vgl. Abschn. Vd) S. 191)
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15.2 Chemical safety assessment:

No chemical safety assessment has been conducted.

SECTION 16: Other information

Information based on classification according to CLP

Full text of any R-phrases referred to under headings 2 and 3:

- R20 Harmful by inhalation
- R36/37/38 Irritating to eyes, respiratory system and skin
- R40 Limited evidence of a carcinogenic effect
- R42/43 May cause sensitisation by inhalation and skin contact
- R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation

Full text of any H-statements referred to under headings 2 and 3:

- 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 through prolonged or repeated exposure if inhaled.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive

Reason for revision: CLP

Publication date: 2003-01-30

Date of revision: 2013-07-01

Revision number: 0300

Product number: 38899

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DPD Dangerous Preparation Directive
 CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

Specific concentration limits CLP

4,4'-methylenediphenyl diisocyanate	C => 5%	STOT SE 3; H335
	C => 0.1%	Resp. Sens. 1; H334
	C => 5%	Skin Irrit. 2; H315
	C => 5%	Eye Irrit. 2; H319

Specific concentration limits DSD

4,4'-methylenediphenyl diisocyanate	C >= 25 %	Xn; R 20-36/37/38-40-42/43-48/20
	10 % <= C < 25 %	Xn; R 36/37/38-40-42/43-48/20
	5 % <= C < 10 %	Xn; R 36/37/38-40-42/43
	1 % <= C < 5 %	Xn; R 40-42/43
	0,1 % <= C < 1 %	Xn; R 42

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.