

**Elan-tech® G 8590**

Version 4.0 SDB\_GB

Revision Date 23.09.2015

Print Date 23.09.2015

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

**1.1 Product identifier**

Trade name : Elan-tech® G 8590

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

Use of the Substance/Mixture : Polyurethane Hardener

**1.3 Details of the supplier of the safety data sheet**

Company : ELANTAS Italia S.r.l.  
Strada Antolini 1  
43044 Collecchio  
Italy  
Telephone : +3907363081  
Telefax : +390736402746  
E-mail address : msds.elantas.italia@altana.com

**1.4 Emergency telephone number**

+39 0736 3081 (8-17 h)

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**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

Acute toxicity, Category 4	H332: Harmful if inhaled.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

**Classification (67/548/EEC, 1999/45/EC)**

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Harmful	R20: Harmful by inhalation.  R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Carcinogenic Category 3	R40: Limited evidence of a carcinogenic effect.
Sensitising	R42/43: May cause sensitisation by inhalation and skin contact.
Irritant	R36/37/38: Irritating to eyes, respiratory system and skin.

**2.2 Label elements**

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal word : Danger

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

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P280 Wear eye protection/ face protection.  
P280 Wear protective gloves.  
P281 Use personal protective equipment as required.  
P285 In case of inadequate ventilation wear respiratory protection.

Hazardous components which must be listed on the label:

DIPHENYLMETHANE DIISOCYANATE

4,4'-methylenediphenyl diisocyanate

MDI modified with tripropylene glycol

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### Additional Labelling:

EUH204 .Contains isocyanates. May produce an allergic reaction.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Diphenylmethane diisocyanate based mixture

#### Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
DIPHENYLMETHANE DIISOCYANATE	25686-28-6	Xn; R20 Xi; R36/37/38 R42/43 Carc.Cat.3; R40 Xn; R48/20	Acute Tox.4; H332 Skin Irrit.2; H315 Eye Irrit.2; H319 Resp. Sens.1; H334 Skin Sens.1; H317 STOT SE3; H335 STOT RE2; H373	$\geq 50 - \leq 100$
4,4'-methylenediphenyl diisocyanate	diphenylmethan e-4,4'- diisocyanate 202-966-0 01- 2119457014-47	Carc.Cat.3; R40 Xn; R20-R48/20 Xi; R36/37/38 R42/43	Acute Tox.4; H332 Eye Irrit.2; H319 STOT SE3; H335 Skin Irrit.2; H315 Resp. Sens.1; H334 Skin Sens.1; H317 Carc.2; H351 STOT RE2; H373	$\geq 30 - < 50$
MDI modified with tripropylene glycol	75880-28-3 01- 2119485612-35	Xn; R20 Xn; R48/20 Xi; R36/37/38 Xn; R40 Xn; R42/43	Acute Tox.4; H332 Skin Irrit.2; H315 Eye Irrit.2; H319 Resp. Sens.1; H334 Skin Sens.1; H317 Carc.2; H351 STOT SE3; H335 STOT RE2; H373	$\geq 20 - < 25$

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : Keep warm and in a quiet place.  
Show this safety data sheet to the doctor in attendance.  
Take off all contaminated clothing immediately.

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- If inhaled : Move to fresh air.  
Keep patient warm and at rest.  
If breathing is irregular or stopped, administer artificial respiration.  
If breathing is labored, administer oxygen.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.  
Do NOT use solvents or thinners.  
If on clothes, remove clothes.  
If skin irritation persists, call a physician.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.  
If eye irritation persists, consult a specialist.  
If easy to do, remove contact lens, if worn.
- If swallowed : Keep at rest.  
Do not induce vomiting without medical advice.  
Keep respiratory tract clear.  
If symptoms persist, call a physician.

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

- Symptoms : Breathing difficulties  
Lachrymation  
Redness  
Irritation

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

- Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

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**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Foam  
Sand

- Unsuitable extinguishing media : High volume water jet

**5.2 Special hazards arising from the substance or mixture**

- Specific hazards during firefighting : Decomposes in a fire giving off toxic fumes: oxides of nitrogen  
The pressure in sealed containers can increase under the influence of heat.  
Cool closed containers exposed to fire with water spray.

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**5.3 Advice for firefighters**

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
- Further information : In the event of fire and/or explosion do not breathe fumes. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

- Personal precautions : Refer to protective measures listed in sections 7 and 8. Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation. Only qualified personnel equipped with suitable protective equipment may intervene. Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.

**6.2 Environmental precautions**

- Environmental precautions : Do not allow uncontrolled discharge of product into the environment. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and material for containment and cleaning up**

- Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Pick up and transfer to properly labelled containers.

**6.4 Reference to other sections**

- For personal protection see section 8.

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**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

- Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms. Persons susceptible to skin sensitisation problems or asthma,

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allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
Avoid inhalation, ingestion and contact with skin and eyes.  
Use only in area provided with appropriate exhaust ventilation.  
Smoking, eating and drinking should be prohibited in the application area.

- Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.
- Hygiene measures : Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

**7.2 Conditions for safe storage, including any incompatibilities**

- Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. To maintain product quality, do not store in heat or direct sunlight. Keep in properly labelled containers.
- Advice on common storage : Keep away from oxidising agents, strongly acid or alkaline materials, as well as of amines, alcohols and water.  
Keep away from food and drink.  
Keep product and empty container away from heat and sources of ignition.
- Dampness : Keep containers dry and tightly closed to avoid moisture absorption and contamination.
- Other data : Stable at normal ambient temperature and pressure.

**7.3 Specific end use(s)**

- Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
4,4'-methylenediphenyl diisocyanate	diphenylmethane-4,4'-diisocyanate	TWA	0,02 mg/m <sup>3</sup> (NCO)	GB EH40
Further information	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-			

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



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	<p>responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.</p>			
	<table border="1"> <tr> <td data-bbox="472 1086 635 1137">STEL</td> <td data-bbox="641 1086 1198 1137">0,07 mg/m3 (NCO)</td> <td data-bbox="1204 1086 1375 1137">GB EH40</td> </tr> </table>	STEL	0,07 mg/m3 (NCO)	GB EH40
STEL	0,07 mg/m3 (NCO)	GB EH40		
Further information	<p>Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk</p>			

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assessment has shown to be a potential cause of occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.

**Biological occupational exposure limits**

Substance name	CAS-No.	Control parameters	Sampling time	Basis
4,4'-methylenediphenyl diisocyanate	101-68-8	urinary diamine: 1 µmol/mol creatinine (Urine)	Post task	GB EH40 BAT

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

DIPHENYLMETHANE : End Use: Workers  
 Exposure routes: Skin contact  
 Potential health effects: Acute systemic effects  
 Value: 50 mg/kg  
 End Use: Workers  
 Exposure routes: Inhalation  
 Potential health effects: Acute systemic effects  
 Value: 0,1 mg/m3  
 End Use: Workers  
 Exposure routes: Skin contact  
 Potential health effects: Acute local effects  
 Value: 28,7 mg/cm2  
 End Use: Workers  
 Exposure routes: Inhalation  
 Potential health effects: Acute local effects  
 Value: 0,1 mg/m3  
 End Use: Workers  
 Exposure routes: Inhalation  
 Potential health effects: Acute systemic effects  
 Value: 0,05 mg/m3  
 End Use: Workers  
 Exposure routes: Inhalation  
 Potential health effects: Acute local effects  
 Value: 0,05 mg/m3

4,4'-methylenediphenyl diisocyanate : End Use: Workers  
 Exposure routes: Skin contact  
 Potential health effects: Acute systemic effects  
 Value: 50 mg/kg  
 End Use: Workers  
 Exposure routes: Skin contact  
 Potential health effects: Acute local effects  
 Value: 28,7 mg/cm2  
 End Use: Workers  
 Exposure routes: Inhalation  
 Potential health effects: Acute systemic effects  
 Value: 0,1 mg/m3  
 End Use: Workers  
 Exposure routes: Inhalation  
 Potential health effects: Acute local effects  
 Value: 0,1 mg/m3  
 End Use: Workers  
 Exposure routes: Inhalation  
 Potential health effects: Long-term systemic effects  
 Value: 0,05 mg/m3  
 End Use: Workers



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Exposure routes: Inhalation  
Potential health effects: Long-term local effects  
Value: 0,05 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Acute systemic effects  
Value: 25 mg/kg  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Acute systemic effects  
Value: 0,05 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Ingestion  
Potential health effects: Acute systemic effects  
Value: 20 mg/kg  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Acute local effects  
Value: 17,2 mg/cm<sup>2</sup>  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Acute local effects  
Value: 0,05 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 0,025 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Long-term local effects  
Value: 0,025 mg/m<sup>3</sup>

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

DIPHENYLMETHANE	:	Fresh water
DIISOCYANATE		Value: > 1 mg/l
		Marine water
		Value: > 0,1 mg/l
		Soil
		Value: > 1 mg/kg
		Sewage treatment plant
		Value: > 1 mg/l
4,4'-methylenediphenyl	:	Fresh water
diisocyanate		Value: > 1 mg/l
		Marine water
		Value: > 0,1 mg/l
		Soil
		Value: 1 mg/kg
		Sewage treatment plant
		Value: > 1 mg/l

**8.2 Exposure controls**

**Engineering measures**

Recommended minimum velocity for exhaust ventilation  
effective ventilation in all processing areas  
Effective exhaust ventilation system

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Ensure that extracted air cannot be returned to the workplace through the ventilation system.

**Personal protective equipment**

- Eye protection : Do not wear contact lenses.  
Safety glasses with side-shields conforming to EN166  
Ensure that eyewash stations and safety showers are close to the workstation location.
- Hand protection  
Material : Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.
- Skin and body protection : Protective suit
- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Use respirator when performing operations involving potential exposure to vapour of the product.  
Respirator with a vapour filter (EN 141)  
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
- Protective measures : Avoid contact with skin.  
Wear suitable protective equipment.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

- Appearance : liquid
- Colour : light yellow
- Odour : musty
- Odour Threshold : not determined
- pH : not determined
- Melting point/freezing point : Not applicable
- Boiling point/boiling range : > 200 °C
- Flash point : > 200 °C
- Evaporation rate : not determined
- Upper explosion limit : Not applicable
- Lower explosion limit : Not applicable

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Vapour pressure	: Not applicable
Relative vapour density	: not determined
Density	: 1,20 g/cm <sup>3</sup> (25 °C)
Bulk density	: not determined
Solubility(ies) Solubility in other solvents	: not determined
Partition coefficient: n- octanol/water	: No data available
Auto-ignition temperature	: > 400 °C
Thermal decomposition	: Method: No data available
Viscosity Viscosity, dynamic	: 140 mPa.s (25 °C)
Viscosity, kinematic	: not determined
Explosive properties	: Not applicable
Oxidizing properties	: Not applicable

**9.2 Other information**

Surface tension	: not determined
Sublimation point	: Not applicable

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**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

Stable under recommended storage conditions.  
Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

**10.2 Chemical stability**

No decomposition if stored and applied as directed.

**10.3 Possibility of hazardous reactions**

Hazardous reactions	: Reacts violently with water. Evolution of CO <sub>2</sub> in closed containers causes overpressure and produces a risk of bursting.
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**10.4 Conditions to avoid**

Conditions to avoid	: Direct sources of heat.
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**10.5 Incompatible materials**

Materials to avoid : Humid air  
Acids and bases  
Amines

**10.6 Hazardous decomposition products**

Hazardous decomposition products : Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.  
Stable under normal conditions.

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**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

**Product:**

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Acute toxicity estimate : 1 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

**Components:**

**DIPHENYLMETHANE DIISOCYANATE:**

Acute oral toxicity : LD50 (Rat, female): > 5.000 mg/kg  
Method: OECD Test Guideline 425  
GLP: yes

Acute dermal toxicity : LD50 (Rabbit, male and female): > 9.400 mg/kg  
Method: OECD Test Guideline 402

**4,4'-methylenediphenyl diisocyanate:**

Acute oral toxicity : LD50 (Rat, male and female): > 2.000 mg/kg  
Method: Tested according to Annex V of Directive 67/548/EEC.  
GLP: yes

Acute inhalation toxicity : LC50 (Rat, male): 1,5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

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**Components:**

**DIPHENYLMETHANE DIISOCYANATE:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Skin irritation  
GLP: yes

**4,4'-methylenediphenyl diisocyanate:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: No skin irritation  
GLP: yes

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Components:**

**DIPHENYLMETHANE DIISOCYANATE:**

Species: Rabbit  
Method: OECD Test Guideline 405  
Result: No eye irritation  
GLP: yes

**Respiratory or skin sensitisation**

**Product:**

Remarks: No data available

**Components:**

**DIPHENYLMETHANE DIISOCYANATE:**

Test Type: Maximisation Test (GPMT)  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: May cause sensitisation by skin contact.  
GLP: yes

Species: Rat  
Result: May cause sensitisation by inhalation.  
GLP: yes

**4,4'-methylenediphenyl diisocyanate:**

Test Type: Buehler Test  
Exposure routes: Dermal  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: Does not cause skin sensitisation.  
GLP: yes

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**Germ cell mutagenicity**

**Carcinogenicity**

**Reproductive toxicity**

**STOT - single exposure**

**Product:**

Remarks: Not applicable

**STOT - repeated exposure**

**Repeated dose toxicity**

**Product:**

Remarks: No data available

**Aspiration toxicity**

**Further information**

**Product:**

Remarks: No data available

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**SECTION 12: Ecological information**

**12.1 Toxicity**

**Product:**

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

**Components:**

**DIPHENYLMETHANE DIISOCYANATE:**

Toxicity to algae : ErC50 (Scenedesmus subspicatus): > 1.640 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 10 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Method: OECD Test Guideline 211

**4,4'-methylenediphenyl diisocyanate:**

Toxicity to algae : ErC50 (Scenedesmus subspicatus): > 1.640 mg/l  
Exposure time: 72 h  
Test Type: static test

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Method: OECD Test Guideline 201  
GLP: yes

**12.2 Persistence and degradability**

**Product:**

Biodegradability : Remarks: No data available

**12.3 Bioaccumulative potential**

**Product:**

Bioaccumulation : Remarks: No data available

**Components:**

**DIPHENYLMETHANE DIISOCYANATE:**

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): 200  
Method: OECD Test Guideline 305  
GLP: yes

**4,4'-methylenediphenyl diisocyanate:**

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Exposure time: 28 d  
Concentration: 0,00008 mg/l  
Bioconcentration factor (BCF): 200  
Method: OECD Test Guideline 305  
GLP: yes

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

**12.6 Other adverse effects**

**Product:**

Additional ecological information : Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Product : In accordance with local and national regulations.  
Container hazardous when empty.  
Do not dispose of with domestic refuse.

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Do not mix waste streams during collection.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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**SECTION 14: Transport information**

**14.1 UN number**

Not regulated as a dangerous good

**14.2 UN proper shipping name**

Not regulated as a dangerous good

**14.3 Transport hazard class(es)**

Not regulated as a dangerous good

**14.4 Packing group**

Remarks : IMDG Code segregation group - none  
Not regulated as a dangerous good

**14.5 Environmental hazards**

Not regulated as a dangerous good

**14.6 Special precautions for user**

Not applicable

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

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**SECTION 15: Regulatory information**

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : 4,4'-methylenediphenyl diisocyanate

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.  
Not applicable

**15.2 Chemical Safety Assessment**

Not applicable



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**SECTION 16: Other information**

**Full text of R-Phrases**

- 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 H-Statements**

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

**Full text of other abbreviations**

- Acute Tox. : Acute toxicity
- Carc. : Carcinogenicity
- Eye Irrit. : Eye irritation
- Resp. Sens. : Respiratory sensitisation
- Skin Irrit. : Skin irritation
- Skin Sens. : Skin sensitisation
- STOT RE : Specific target organ toxicity - repeated exposure
- STOT SE : Specific target organ toxicity - single exposure

**Further information**

- Training advice : Provide adequate information, instruction and training for operators.

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