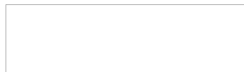


EMD73RB



Version 3 No data available
Chemwatch Safety Data Sheet (Conforms to Regulations (EC) No 1907 / 2006, (EC) No 1272 / 2008 (CLP)) Print Date: 19-May-2011
CHEMWATCH SDS Revision Date: 30-May-2008
Issue Date: 30-May-2008

SAFETY DATA SHEET

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

1.1. Product Identifier

Product name: EMD73RB
Chemical product name: No data available
Synonyms: EMD73RB
Proper shipping name: No data available
Chemical formula: No data available
Other means of identification: No data available
Index number: No data available
ID number: No data available
CAS number: No data available
REACH registration number: No data available
EC number: Not Available

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

Relevant identified uses: Polyurethane rubber binder.
Uses advised against: No data available

1.3. Details of the supplier of the safety data sheet

Registered company name: Era Polymers Pty Ltd
Address: 25-27 Green Street, Banksmeadow, NSW, 2019, AUS
Telephone: +61 2 9666 3788
Fax: +61 2 9666 4805
Email:
Website: www.erapol.com.au

1.4. Emergency telephone number

Association / Organisation:
Other emergency telephone numbers: 1800 039 008 (AUS)
Other emergency telephone numbers: +61 3 9573 3112; +800 243 62255

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

DSD classification: In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) or CLP (Regulation (EC) No 1272/2008) regulations
DSD classification (additional): No data available
DPD classification:
R36/37/38 • Irritating to eyes, respiratory system and skin.
R42/43 • May cause SENSITISATION by inhalation and skin contact.
R48/20 • Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R33? • Cumulative effects may result following exposure*.
R40(3)? • Limited evidence of a carcinogenic effect*.
R62? • May possibly affect fertility*.

CLP classification:
Skin Corrosion/Irritation Category 2
Eye Irritation Category 2A
Respiratory Sensitizer Category 1
Skin Sensitizer Category 1
STOT - SE (Resp. Irr.) Category 3
STOT - RE Category 2

CLP classification (additional): No data available

2.2. Label elements

CLP label elements



Signal word:	DANGER	
Hazard statement(s):	H315	Causes skin irritation
	H319	Causes serious eye irritation
	H334	May cause allergic or asthmatic symptoms or breathing difficulties if inhaled
	H317	May cause allergic skin reaction
	H335	May cause respiratory irritation
	H373	May cause damage to organs through prolonged or repeated exposure by inhalation.

Determined by Chemwatch using CLP criteria

Additional Statement(s):	No data available	
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Supplementary statement(s):	Code	Phrase
Precautionary statement(s):	Prevention	Phrase
	Code	
	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P264	Wash thoroughly after handling.
	P271	Use only outdoors or in a well-ventilated area.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P281	Use personal protective equipment as required.
	P285	In case of inadequate ventilation wear respiratory protection.
	Response	Phrase
	Code	
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	P304+P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
	P304+P341	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308+P313	IF exposed or concerned: Get medical advice/ attention.
	P312	Call a POISON CENTER or doctor/physician if you feel unwell.
	P314	Get medical advice/attention if you feel unwell.
	P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
	P337+P313	If eye irritation persists: Get medical advice/attention.
	P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
	P363	Wash contaminated clothing before reuse.
	Storage	Phrase
	Code	
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
	P405	Store locked up.

DSD / DPD label elements



Relevant risk statements are found in section 2.1

Indication(s) of danger:	CONSIDERED A DANGEROUS MIXTURE ACCORDING TO DIRECTIVE 1999/45/EC AND ITS AMENDMENTS.	
Safety advice:	S23	• Do not breathe gas/fumes/vapour/spray.
	S51	• Use only in well ventilated areas.
	S09	• Keep container in a well ventilated place.
	S53	• Avoid exposure - obtain special instructions before use.
	S401	• To clean the floor and all objects contaminated by this material, use water and detergent.
	S07	• Keep container tightly closed.
	S13	• Keep away from food, drink and animal feeding stuffs.
	S26	• In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
	S46	• If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

2.3. Other hazards

R33?	• Cumulative effects may result following exposure*.
R40(3)?	• Limited evidence of a carcinogenic effect*.
R62?	• May possibly affect fertility*.
* (limited evidence).	

No data available

PBT/vPvB criteria	No data available
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SECTION 3: Composition / information on ingredients

3.1. Substances

See 'Composition on ingredients' in section 3.2

3.2. Mixtures

1. CAS No	2. EC No	3. Index No	4. REACH No	%[weight]	Name	Classification according to Directive 1999/45/EC [DPD]	Classification according to (EC) No 1272/2008 [CLP]
1.		2.		>60	prepolymer		
3.							
4.							
1.					contains isocyanate, typically		
2.							
3.							
4.							
							Carc. 2
							Acute Tox. 4 *
						Xn R20 R48/20	STOT RE 2 *
1. 101-68-8						R36/37/38	Eye Irrit. 2
2. 202-966-0, 247-714-0				10.3-10.7	4,4'-diphenylmethane diisocyanate (MDI)	R40	STOT SE 3
3. 615-005-00-9						R42/	Skin Irrit. 2
4. No data available						43	Resp. Sens. 1
							Skin Sens. 1
							CLP classification according to Annex VI of CLP (Regulation (EC) No 1272/2008)
1.					No other ingredient information supplied.		
2.							
3.							
4.							

Identification of PBT / vPvB substances / mixtures:	No data available
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SECTION 4: First aid measures

4.1. Description of first aid measures

General:	No data available
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Ingestion:

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Eye Contact: If this product comes in contact with the eyes:

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact: If skin contact occurs:

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation:

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

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

Inhaled: • Although inhalation is not thought to produce harmful effects (as classified under EC Directives), the material may still produce health damage, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally confined to doses producing mortality rather than those producing morbidity (disease, ill-health).
Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals.

following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage.

Ingestion: • Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).

Skin Contact: • Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic).

The material may accentuate any pre-existing dermatitis condition

Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Eye: • Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur. • The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Chronic: • Persons with a history of asthma or other respiratory problems or are known to be sensitised, should not be engaged in any work involving the handling of isocyanates. [OCTRADE-Bayer, APMF]. Practical evidence shows that inhalation of the material is capable of inducing a sensitisation reaction in a substantial number of individuals at a greater frequency than would be expected from the response of a normal population. Pulmonary sensitisation, resulting in hyperactive airway dysfunction and pulmonary allergy may be accompanied by fatigue, malaise and aching. Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals. Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping. Sensitisation may give severe responses to very low levels of exposure, in situations where exposure may occur. Isocyanate vapours/mists are irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis with wheezing, gasping and severe distress, even sudden loss of consciousness, and pulmonary oedema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia.

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

For sub-chronic and chronic exposures to isocyanates:

- This material may be a potent pulmonary sensitiser which causes bronchospasm even in patients without prior airway hyperreactivity.
- Clinical symptoms of exposure involve mucosal irritation of respiratory and gastrointestinal tracts.
- Conjunctival irritation, skin inflammation (erythema, pain vesiculation) and gastrointestinal disturbances occur soon after exposure.
- Pulmonary symptoms include cough, burning, substernal pain and dyspnoea.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Foam
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility:

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

5.3. Advice for firefighters

Fire Fighting:

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

Fire/Explosion Hazard:

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

Combustion products include:

carbon dioxide (CO₂)

isocyanates

and minor amounts of

hydrogen cyanide

nitrogen oxides (NO_x)

other pyrolysis products typical of burning organic material

May emit poisonous fumes.

May emit corrosive fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Protective Equipment:

Gas tight chemical resistant suit. Limit exposure duration to 1 BA set 30 mins.

Minor Spills:

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.

Major Spills:

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.

- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

6.2. Environmental precautions

Not applicable

6.3. Methods and material for containment and cleaning up

Not applicable

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the MSDS

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe handling

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- **DO NOT allow clothing wet with material to stay in contact with skin**

Fire and explosion protection

See section 5

Other information

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

Not applicable

7.2. Conditions for safe storage, including any incompatibilities

Suitable container:

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Storage incompatibility:

- Avoid reaction with oxidising agents

Package Material Incompatibilities:

Not applicable

7.3. Specific end use(s)

See section 1.2

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Derived No Effect Level (DNEL)

Exposure Pattern	Workers	General Population
Long term - dermal, systemic effects	No data available	No data available
Long term - inhalation, systemic effects	No data available	No data available
Long term - oral, systemic effects	No data available	No data available
Long term - dermal, local effects	No data available	No data available
Long term - inhalation, local effects	No data available	No data available

Occupational Exposure Limits (OEL)

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes
UK Workplace Limits (WELs)	Exposure 4,4'-diphenylmethane diisocyanate (Isocyanates, all (as -NCO))	(MDI)	0.02		0.07				Sen, HSC/E plans to review the limit values for this substance

Not applicable

Not applicable

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator.

8.2.2. Personal protection



Eye and face protection:

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59]

Skin protection: See Hand protection: below

Hand protection:

- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber

NOTE

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

Body protection: See Other protection: below

Other protection:

- Overalls.
- P.V.C. apron.
- Barrier cream
- Skin cleansing cream

Respiratory protection: Not applicable

Thermal hazards: No data available

Recommended material(s): Not applicable

8.2.3. Environmental exposure controls

See section 12

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Medium amber liquid with a slight odour; reacts with water.
Odour	No data available
Odour threshold	No data available
Taste	No data available
pH (1% solution)	No data available
pH (as supplied)	No data available
Melting point / freezing point	No data available
Initial boiling point and boiling range	>200
Flash point	>200
Evaporation rate	No data available
Flammability	No data available
Upper / lower flammability or exposure limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.15-1.20
Solubility(ies)	Immiscible
Partition coefficient: n-octanol / water	No data available
Auto-ignition temperature	No data available
Critical temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available
Physical state	Liquid
Upper Explosive Limit	No data available
Lower Explosive Limit	No data available
Surface Tension	No data available
Volatile Component (%vol)	No data available
Gas group	No data available
Molecular weight	No data available
Viscosity	No data available
Evaporation Rate	No data available
IUCLID Remarks	No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity See section 7.2

10.2. Chemical stability |

- Presence of incompatible materials.
- Product is considered stable.

- Hazardous polymerisation will not occur.

10.3.	Possibility of hazardous reactions	See section 7.2
10.4.	Conditions to avoid	See section 7.2
10.5.	Incompatible materials	See section 7.2
10.6.	Hazardous decomposition products	See section 5.3

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Mutagenicity:	No data available
Reproductive Toxicity:	No data available
Carcinogenicity:	No data available
STOT - single exposure:	No data available

EMD73RB; None assigned. Refer to individual constituents. 4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI);¹ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (rat) LDLo: 9200 mg/kg	Skin (rabbit): 500 mg /24 hours
Inhalation (rat) LC50: 178 mg/m ³ /4h Dermal Sensitiser *	
Oral (mouse) LD50: 2200 mg/kg Respiratory Sensitiser (g.pig) *	
Dermal (rabbit) LD50: >6200 mg/kg * [* = Bayer CCINFO 2133615]	
Oral (Rat) LD50: 9200 mg/kg	

¹ for diisocyanates: In general, there appears to be little or no difference between aromatic and aliphatic diisocyanates as toxicants. In addition, there are insufficient data available to make any major distinctions between polymeric (<1000 MW) and monomeric diisocyanates. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Allergic reactions which develop in the respiratory passages as bronchial asthma or rhinoconjunctivitis, are mostly the result of reactions of the allergen with specific antibodies of the IgE class and belong in their reaction rates to the manifestation of the immediate type. In addition to the allergen-specific potential for causing respiratory sensitisation, the amount of the allergen, the exposure period and the genetically determined disposition of the exposed person are likely to be decisive. Particular attention is drawn to so-called atopic diathesis which is characterised by an increased susceptibility to allergic rhinitis, allergic bronchial asthma and atopic eczema (neurodermatitis) which is associated with increased IgE synthesis. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. Isocyanate vapours/mists are irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis with wheezing, gasping and severe distress, even sudden loss of consciousness, and pulmonary oedema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. Inhalation (human) TCLo: 0.13 ppm/30 mins Eye (rabbit): 0.10 mg moderate

SECTION 12: Ecological information

12.1. Toxicity

Fish:	No data available
Daphnia Magna:	No data available
Algae:	No data available
Toxic to aquatic micro-organisms:	No data available

4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI):

Hydrolysis would represent the primary fate mechanism for the majority of the commercial isocyanate monomers, but, is tempered somewhat by the lack of water solubility. In the absence of hydrolysis, sorption to solids (e.g., sludge and sediments) will be the primary mechanism of removal.

DO NOT discharge into sewer or waterways.

Toxicity Fish: LC50(96)95.24-134.37mg/L

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
EMD73RB	No Data Available	No Data Available
4,4'-diphenylmethane diisocyanate (MDI)	LOW	LOW

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
4,4'-diphenylmethane diisocyanate (MDI)	LOW

12.4. Mobility in soil

Ingredient	Mobility
4,4'-diphenylmethane diisocyanate (MDI)	LOW (ESTIMATED)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	No data available	No data available	No data available

PBT and vPvB Criteria

FDL and VFD Criteria fulfilled?	No data available	No data available	No data available
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12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal:

- Treat isocyanate spills with sufficient amounts of isocyanate decontaminant preparation.
- Typically, such a preparation may consist of: saw dust: 20 parts by weight Kieselguhr 40 parts by weight plus a mixture of {ammonia (s.g. 0.880) 8% v/v non-ionic surfactant 2% v/v water 90% v/v}.
- Let stand for 24 hours.

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

Waste treatment options:

Sewage disposal options:

No relevant data

Other disposal recommendations:

SECTION 14: Transport information

Labels Required:

No data available

Land transport (ADR/ RID/ GGVSE)

No data available

14.1. UN number	None	14.4. Packing group	No data available	
14.2. UN proper shipping name	No data available	14.5. Environmental hazard	No relevant data	
14.3. Transport hazard class(es)	No data available	14.6. Special precautions for user	Hazard identification (Kemler)	No data available
			Classification Code	No data available
			Hazard Label	No data available
			Special provisions	No data available
			Add limited quantity	No data available

Air transport (ICAO-IATA / DGR)

No data available

14.1. UN number	None		14.4. Packing group	No data available	
14.2. UN proper shipping name	No data available		14.5. Environmental hazard	No relevant data	
14.3. Transport hazard class(es)			14.6. Special precautions for user	Special provisions	No data available
				Cargo Only Packing Instructions	No data available
				Cargo Only Maximum Qty / Pack	No data available
	ICAO/IATA Class (Subrisk):	No data available		Passenger and Cargo Packing Instructions	No data available
	ERG Code	No data available		Passenger and Cargo Maximum Qty / Pack	No data available
				Passenger and Cargo Limited Quantity Packing Instructions	No data available
				Passenger and Cargo Maximum Qty / Pack	No data available

Sea transport (IMDG-Code / GGVSee)

No data available

14.1. UN number	None			14.4. Packing group	No data available	
14.2. UN proper shipping name	No data available			14.5. Environmental hazard	No relevant data	
14.3. Transport hazard class(es)	No data available	IMDG Subrisk	No data available	14.6. Special precautions for user	EMS Number	No data available
					Special provisions	No data available
					Limited Quantities	No data available

Inland waterways transport (ADNR/ River Rhine)

No data available

14.1. UN number	None	14.4. Packing group	No data available
14.2. UN proper shipping name	No data available	14.5. Environmental hazard	No relevant data
14.3. Transport hazard class(es)	No data available	14.6. Special precautions for user	Classification code Limited quantity Equipment required Fire cones number
	ADNR Label		No data available No data available No data available No data available
14.7. Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code			
No data available			

SECTION 15: Regulatory information

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

Regulations for ingredients

4,4'-diphenylmethane diisocyanate (MDI) (CAS: 101-68-8,26447-40-5) is found on the following regulatory lists;

"EU Directive 2002/72/EC Plastic materials and articles intended to come into contact with foodstuffs - Annex II Section A: List of authorised monomers and other starting substances", "European Chemicals Agency (ECHA) List of substances identified for registration in 2010", "European Customs Inventory of Chemical Substances (English)", "European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)", "European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP. 31", "European Union (EU) Control of Major Accident Hazards Involving Dangerous Substances - Seveso Category", "European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Air Transport Association (IATA) Dangerous Goods Regulations", "OECD Representative List of High Production Volume (HPV) Chemicals", "Scotland Pollution Inventory"

No data for EMD73RB (CW: 4941-73)

This safety data sheet is in compliance with the following EU legislation and its adaptations – as far as applicable - : 67/548/EEC, 1999/45/EC, 76/769/EEC, 98/24/EC, 92/85/EEC, 94/33/EC, 91/689/EEC, 1999/13/EC, as well as the following British legislation:

- The Control of Substances Hazardous to Health Regulations (COSHH) 2002
- COSHH Essentials
- The Management of Health and Safety at Work Regulations 1999

15.2. Chemical safety assessment

ANNEX 1

Ingredient	Annex 1 67/548/EEC
4,4'-diphenylmethane diisocyanate (MDI)	615-005-00-9
4,4'-diphenylmethane diisocyanate (MDI)	615-005-00-9

Annex VI

Skin Corrosion/Irritation Category 2
Eye Irritation Category 2A
Respiratory Sensitizer Category 1
Skin Sensitizer Category 1
STOT - SE (Resp. Irr.) Category 3
STOT - RE Category 2

RISK

Risk Codes	Risk Phrases
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause SENSITISATION by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.

SECTION 16: Other information

LIMITED EVIDENCE

R33? • Cumulative effects may result following exposure*.
R40(3)? • Limited evidence of a carcinogenic effect*.
R62? • May possibly affect fertility*.
* (limited evidence).

ANNEX 2: Indications of Danger

Xn	Harmful	
Substance	CAS	Suggested codes
4, 4' - diphenylmethane diisocyanate (MDI)	26447- 40- 5	R43
ND		

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
4,4'-diphenylmethane diisocyanate (MDI)	101-68-8, 26447-40-5

OTHER

- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

- For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 16 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

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Not applicable

Annex to extended safety data sheet (eSDS) (REACH)

Exposure scenario

Use of the preparation / substance in the following processes is inadvisable in the Industrial / Professional Worker and Consumer use scenarios unless the following exposure controls are modified:

- Respiratory Protection
- A lower duration of use
- Increased Ventilation

NO RESTRICTIONS