



SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

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Deckmaster HFS System ID Hardener

Revision 0

Revision date 2013-11-11

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

1.1. Product identifier

Product name Deckmaster HFS System ID Hardener

1.3. Details of the supplier of the safety data sheet

Company	Resdev Ltd
Address	Pumaflor House Ainleys Industrial Estate Elland HX5 9JP
Web	www.resdev.co.uk
Telephone	+44 (0)1422 379131
Fax	+44 (0)1422 370943
Email	info@resdev.co.uk
Email address of the competent person	info@resdev.co.uk

1.4. Emergency telephone number

Emergency telephone number +44 (0)1422 379131
9.00am to 5.00pm Mon - Fri

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification - 1999/45/EC
Xn; R20-40-42/43-48/20 Xi; R36/37/38
Symbols: Xn: Harmful.

Main hazards Harmful by inhalation. Irritating to eyes, respiratory system and skin. Limited evidence of a carcinogenic effect. May cause sensitisation by inhalation and skin contact. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

2.2. Label elements

Symbols Xn: Harmful.



Risk 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.

Safety phrases
S22 - Do not breathe dust.
S23 - Do not breathe gas/fumes/vapour/spray.
S24 - Avoid contact with skin.
S36/37 - Wear suitable protective clothing and gloves.

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2.2. Label elements

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S63 - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

67/548/EEC / 1999/45/EC

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
Methylenediphenyl diisocyanate	615-005-00-9	26447-40-5	247-714-0		60 - 70%	Carc. Cat. 3; R40 Xn; R20-48/20 Xi; R36/37/38 R42/43
4,4'-Diphenylmethane-diisocyanate	615-005-00-9	9016-87-9			30 - 40%	

Description

Three Pack Polyurethane Floor Coating.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is laboured, oxygen should be administered by qualified personnel.
Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin contact	After contact with skin, wash immediately with plenty of warm soapy water. Get medical attention if irritation develops. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.

Further information

Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash all contaminated clothing before reuse.
Notes to physician	Symptomatic treatment and supportive therapy as indicated. Following severed exposure the patient should be kept under medical review for at least 48 hours/.

SECTION 5: Firefighting measures

Further information

Suitable extinguishing media	Foam, CO2 or dry powder.
Other Information	Due to reaction with water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated.
Specific Hazards	No specific hazard.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBS) with a full face-piece operated in positive pressure mode. PVC boots, gloves, safety helmet and protective clothing should be worn.
Hazardous thermal decomposition products	Combustion products may include: carbon dioxide (CO,CO2) nitrogen oxides (NO, NO2) hydrocarbons and HCN.
Unsuitable Extinguishing Media	Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous. Prevent washings from entering water courses, keep fire exposed containers cool by spraying with water.

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SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Immediately contact emergency personnel. Evacuate the area. Keep upwind to avoid inhalation of vapours. Clean-up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including respiratory protection. Use suitable protective equipment.

6.3. Methods and material for containment and cleaning up

If the product is in its solid form: Spilled MDI flakes should be picked up carefully. The area should be vacuum cleaned to remove remaining dust particles completely. If the product is in its liquid form: Absorb spillages onto sand, earth or any suitable adsorbent material. Leave to react for at least 30 minutes. Do not absorb onto sawdust or other combustible materials. Shovel into open-top drums for further decontamination. Wash the spillage area with water. Test atmosphere for MDI vapour. Neutralise small spillages with decontaminant. Remove and dispose of residues.

Further information**Environmental precautions and cleanup methods**

Avoid dispersal of split material and runoff and contact with soil, waterways, drains and sewers.

SECTION 7: Handling and storage**Further information****Information on Safe Handling**

Do not breathe vapour/spray. Avoid contact with skin and eyes. Atmospheric concentrations should be minimised and kept as low as reasonably practicable below the occupational exposure limit. The efficiency of the ventilation system must be monitored regularly because of the possibility of blockage. When the product is sprayed or heated, suitable respiratory protection equipment with positive air supply is required. Keep equipment clean.

A basic essential in sampling, handling and storage is the prevention of contact with water. Keep stocks of decontaminant readily available.

Requirements for Storage Rooms and packaging Materials

Store in original container. Keep in original container. Keep containers tightly closed. Keep only in the original container in a cool, well-ventilated place.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.1.1. Exposure Limit Values**

Deckmaster HFS System ID Hardener	WEL 8-hr limit ppm:	WEL 8-hr limit mg/m ³ : 0.02
	WEL 15 min limit ppm:	WEL 15 min limit mg/m ³ :

8.2. Exposure controls**Eye / face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates that is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin protection - Handprotection

Use chemical resistant gloves classified under Standard EN374: protective gloves against chemicals and microorganisms. Examples of glove materials that might provide suitable protection include: Butyl rubber, Chlorinated polyethylene, Polyethylene, Ethyl vinyl alcohol copolymers laminated ("EVAL"), Polychloroprene (Neoprene), Nitrile/butadiene rubber ("nitrile" or "NBR"), Polyvinyl chloride ("PVC" or "vinyl"), Fluoroelastomer (Viton).

Skin protection - Other

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory and at the end of the day.

Respiratory protection

Use local exhaust or general dilution ventilation to control exposure within applicable limits.

8.2.3. Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions

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8.2. Exposure controls

to acceptable levels.

Further information

Recommended monitoring procedures.

Medical supervision of all employees who handle or come in contact with respiratory sensitisers is recommended. Personnel with a history of asthma-type conditions, bronchitis or skin sensitisation conditions should not work with MDI based products. The Occupational Exposure Limits listed do not apply to previously sensitised individuals. Sensitised individuals should be removed from any further exposure.

Occupational exposure controls

Provide exhaust ventilation or other engineering controls to keep airborne concentrations of vapours below their respective occupational exposure limits. MDI can only be smelled if the occupational exposure limit has been exceeded considerably.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State	Liquid
Colour	Brown
Odour	Slight
Flash point	100
Solubility	Insoluble in water

SECTION 10: Stability and reactivity

10.2. Chemical stability

Stable at room temperature. Reaction with water (moisture) produces CO₂-gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents.

MDI is soluble with, and heavier than water and sinks to the bottom but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas.

10.4. Conditions to avoid

Avoid high temperatures.

10.5. Incompatible materials

Water, alcohols, amines, bases and acids.

10.6. Hazardous decomposition products

Combustion products may include: carbon dioxide (CO, CO₂) nitrogen oxides (NO, NO₂) hydrocarbons and HCN.

SECTION 11: Toxicological information

11.1.4. Toxicological Information

4,4'-Diphenylmethane-diisocyanate	Inhalation Rat LC50/4 h: 0.49 mg/l	Oral Rat LD50: > 5000 mg/kg
	Dermal Rabbit LD50: > 5000 mg/kg	

SECTION 12: Ecological information

SECTION 13: Disposal considerations

Disposal methods

The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times

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Disposal methods	
	comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Further information	
European Waste Catalogue (EWC)	The relevant EU directives and local, regional and national regulations must be complied with. It is among the tasks of the end user to assign the waste to waste codes specific to industrial sectors and processes according to the European Waste catalogue. It is recommended that the details be agreed with the waste disposer responsible.

SECTION 14: Transport information
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ADR/RID	
	The product is not classified as dangerous for carriage.

IMDG	
	The product is not classified as dangerous for carriage.

IATA	
	The product is not classified as dangerous for carriage.

SECTION 15: Regulatory information

SECTION 16: Other information

Other information	
	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Text of risk phrases in Section 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.