

SAFETY DATA SHEET

conform 91/155/EEG – 2001/58/EG

Date of issue: 30 December 2006, version 1
Commercial product name: DRY FLEX[®] 4 B
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1. Identification of the substance / preparation and the company / undertaken.

Product name and code: DRY FLEX[®] 4 B
Material uses: Component of elastic repair compound.
Identification company: Repair Care International B.V.
Cartografenweg 34
5141MT Waalwijk
The Netherlands
Postbus 273
5140 AG Waalwijk
The Netherlands
Tel: + 31(0) 416 650095
Fax: + 31(0) 416 652024
E - mail: info@repair-care.com
URL: www.repair-care.com
Emergency telephone number: England & Wales – NHS Direct (24 hours), tel. 0845 46 47
www.nhsdirect.nhs.uk
Scotland – NHS 24 (24 hours), tel. 08454 24 24 24
www.nhs24.co.uk

2. Composition / information on ingredients.

Substance / preparation:	Preparation.			
Ingredient	% weight	danger	CAS#	EC#
M-phenylenebis(methylamine)	< 40	-	1477-55-0	216-032-5
Polyxypropylenediamine	< 40	Xn; R21/22 C; R34 R52/53	9046-10-0	-
2,4,6-Tri(dimethylaminomethyl)phenol	< 20	Xn; R22 Xi; R36/38	90-72-2	202-013-9

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3. Hazard identification.

The preparation is classified in accordance with Directive 1999/45/EC or Directive 67/548/EEC and its amendments.

C	Corrosive.
R22	Harmful if swallowed.
R34	Causes burns.
R36/38	Irritating to eyes and skin.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Material may not end up in eyes, on skin or on clothing. DO NOT swallow. Do not inhale vapours or fog. Keep packaging closed. Only use in case of sufficient ventilation. Wash carefully after using the product. Prevent contact with ground and surface water from material that is spilled and flowing away.

4. First – aid measures.

General:	In the event of an accident or when feeling unwell consult a physician without delay.
Eye contact:	Exposure causes irritation to the eyes. Remove contact lenses, and rinse with water while keeping the eyelids open for at least 15 minutes. Assist the victim with rinsing. Consult an optometrist.
Skin contact:	Remove contaminated clothing. Rinse immediately with plenty of COLD water (at least 15 minutes) and then wash with water and soap, if available. Take a shower if necessary. Consult a dermatologist.
Swallowing:	Provided the patient is conscious, rinse mouth with water and drink minimum 2 glasses of water. DO NOT induce patient to vomit. Obtain immediate medical assistance or take the victim directly to the hospital. The person should be placed and kept in the recovery position if unconscious.
If aerosol or vapour is inhaled in high concentrations:	Take the person into the fresh air and keep him/her warm. Allow the person to rest in a semi-seated position. Consult a physician. Administer if necessary supplemental oxygen.
Further medical treatment:	Symptomatic treatment and supportive therapy as prescribed.

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5. Fire – fighting measures.

Suitable extinguishing media: CO₂, (alcohol resistant) foam, dry powder, water spray or sand should be used. Never use direct water jet. Prevent washings from entering the sewer system.

Unusual fire/explosion hazards: Not flammable. If involved in a fire, it may emit noxious and toxic fumes. Decomposition products may be a hazard to health. Combustion products may include nitrogen components, carbon monoxide and carbon dioxide. Evacuate the area except first aid staff.

Special protective equipment for fire fighters: Self contained breathing apparatus and full protective clothing to be worn under fire fighting conditions. Only use qualified personnel who are well aware of the dangers of this product. Acid resistant protective equipment must be worn in the vicinity of the fire. Clean the equipment thoroughly after use (shower, clean and check clothing thoroughly).

6. Accidental release measures.

Personal precautions: Ensure acid protective clothing and respiratory protection is worn when cleaning up spillage. Keep up strict hygiene. Can form gasses heavier than air. Ventilate and evacuate the area.

Environmental precautions: Do not discharge as a concentrate into drains, sewers or surface water. Construct a dike to prevent spreading.

Cleaning methods: Contain spill with sand, ground or other non-flammable absorption material. Collect the waste product in suitable drums for disposal. Neutralise the residue with a dilute solution of acetic acid.

7. Handling and storage.

Handling: When handling observe the usual precautionary measures for chemicals. Do not inhale vapours and avoid contact with the material. Blend the product on a stable place and prevent spill of the product during processing. Good housekeeping standards and regular safe removal of waste materials will minimize risks.

Storage: Keep container tightly closed in a cool and well ventilated place. Keep separated from foodstuffs and animal foods. Prevent product temperatures rising above 50 °C and under 5 °C. Keep separate from incompatible materials such as acids.

Storage material: - suitable: Original packaging, plastic.
- unsuitable: -

Storage temperature: Recommended storage temperature 20 ± 10 °C.

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8. Exposure controls / personal protection.

Exposure limits.

Ingredient name	Occupational exposure limits UK as TWA (8 hrs.) in mg / m ³ :			
	MAC (UK,2006)	NIOSH	others	Remark
M-phenylenebis(methylamine)	-	0,1	-	skin

Personal protection: Do not smoke, eat or drink whilst working. Wear suitable protective clothing (preferably plasticized cotton or an apron). Eating, drinking and smoking are prohibited in areas where this material is handled and stored.

Respiratory protection: Adequate ventilation (ventilation factor > 1), if possible supported with suction at the source.

Skin and body: Wear suitable protective clothing (preferably an apron in combination with in combination with work sleeves and overall or protecting clothing for once-only use), gloves and eye/face protection. Remove contaminated clothing immediately. Keep working clothes separate (on location e.g. in a closed plastic bag) and change daily. Cotton as working clothes is because of penetrability less preferable, use cotton in combination with a plastic protection. Inform at the clothing supplier to the breakthrough time for epoxy products.



Hands: Wash hands well before breaks and at the end of work. Gloves should be worn to avoid contact with skin. For repeated or long term use, use gloves made from nitrile rubber or neoprene. Do not use vinyl, cotton or natural rubber.



Eyes: Chemical safety glasses (also if small quantities are processed). Eyewash fountain must be nearby (if possible). Full face shield if splashing may occur.



9. Physical and chemical properties.

General information.

Appearance: Liquid.
Colour: Transparent.
Odour: Characteristic, like ammonia.

Important health, safety and environmental information

pH: Not available.
Boiling point: > 100 °C.
Solidification point: < 0 °C.
Flash point: > 62 °C.
Explosive properties: Not available.
Vapour pressure: Not available.
Relative density: 1,05 (water = 1).
Solubility in water: Partly miscible.
Viscosity: Not available.
Vapour density: > 1 (air = 1).
Evaporation rate: Slower than ether.

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10. Stability and reactivity.

Stability:	Stable at room temperature.
Conditions to avoid:	Avoid high (> 50 °C) and low (< 5 °C) temperatures.
Materials to avoid:	Reactive acids.
Hazardous decomposition products:	Unlikely under normal industrial use and at operating temperatures.

11. Toxicological information.

Acute toxicity from the components:

Product information:	M-phenylenebis(methylamine).
LD ₅₀ (oral, rat):	930 mg / kg.
LD ₅₀ (dermal, rabbit):	2.000 mg / kg.
Guinea pig:	sensitisation in 7 of 10 animals (intradermal induction - 0.1%; topical induction - 10%; challenge - 2% & 1%).
Product information:	Polyoxypropylenediamine.
LD ₅₀ (oral, rat):	480 mg / kg.
LD ₅₀ (dermal, rabbit):	2.090 mg / kg.
Product information:	2,4,6-Tri(dimethylaminomethyl)phenol.
LD ₅₀ (oral, rat):	1.673 mg / kg.
LD ₅₀ (dermal, rabbit):	1.242 mg / kg.

The following health hazard assessment is based on an assessment of the composition of this product.

Effects on the eyes:	Very dangerous in case of contact with the eyes (irritating, caustic). Inflammation of the eye is characterised by redness, tears and itching.
Effects on the skin:	Very dangerous in case of contact with the skin (caustic, irritating). Contact with the skin can cause burns. Inflammation of the skin is manifested by itching, chips, redness and sometimes by blisters. Prolonged or repeated exposure in combination with other epoxy products may damage the skin and may cause irritation eczema.
Effect on the respiratory organs:	Irritation of mucous membranes and respiratory tract. Painful throat. Burning feeling. Cough. Shortness of breathe.
Ingestion:	Harmful if swallowed.

Preparation contains no volatile organic compounds (VOC components), according to the criteria of the directive on VOC products (EU directive 1999/13). A volatile organic compound (VOC) mean any organic compound having at 293,15 K a vapour pressure of 0,01 kPa or more, or having a corresponding volatility under the particular conditions of use.

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12. Ecological information.

Ecotoxicity from the components.

Product information:	M-phenylenebis(methylamine).
LC ₅₀ (fish, golden orfe):	130 mg / l.
EC ₁₀ (bacteria, p. pudita):	90 mg / l.
Product information:	Polyoxypropylenediamine.
LC50 (fish):	> 100 mg / l (96 hrs.).
EC10 (daphnia):	15 mg / l (48 hrs.).
IC50 (algae):	135 mg / l (72 hrs.).
Product information:	2,4,6-Tri(dimethylaminomethyl)phenol.
LC ₅₀ (fish, rainbow trout):	222 mg / l (24 hrs.), oncorhynchus mykiss.
LC ₁₀₀ (fish, rainbow trout):	240 mg / l (96 hrs.), oncorhynchus mykiss.
LC ₀ (fish, rainbow trout):	180 mg / l (96 hrs.), oncorhynchus mykiss.
LC ₅₀ (fish, carp):	249 mg / l (24 hrs.), cyprinus carpio.
LC ₅₀ (fish, carp):	175 mg / l (96 hrs.), cyprinus carpio.
EC ₁₀ :	718 mg / l (96 hrs.).
Mobility:	The product is only partly soluble in water.
Persistence / degradability:	From the components poor biologically degradable.
Bioaccumulation:	No data.
Other harmful effects:	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
WGK:	2 (Wassergefährdungsklasse or water pollution class, German Water Resources Act., water pollutant).

13. Disposal considerations.

Product waste:	Incinerate in a hazardous waste incinerator suitable for the disposal of noxious chemical waste in accordance with the stipulations of the relevant regulations. Waste generation should be avoided or minimised where ever possible. If this is not possible, destruction must take place in an approved facility which is equipped to absorb and neutralise acid gasses and other toxic processing products. Waste, even small quantities, should never be poured down drains, sewers or water surfaces.
Eural waste disposal code:	08 04 09* (Waste adhesives and sealants containing organic solvents or other dangerous substances).
Empty containers:	May be reconditioned only after the contents have been completely removed.

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14. Transport information.

Classification as ADR material for road transport.

UN number: 3267.
Proper shipping name: UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (mixture contains polyoxypropylendiamine and m-phenylenebis(methylamine)), Class 8, II.
ADR class: 8.
Hazard no.: 88.
Packaging: II.



ADR label:
Remark:

Supplier makes in normal circumstances use of the complete exemption in accordance with LQ22 and number 3.4 of the ADR (maximum gross content for inner packaging 0,5 l and 1 l as combination packaging).

Classification as ICAO/IATA material for air transport.

UN number: 3267.
Proper shipping name: UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (mixture contains polyoxypropylendiamine and m-phenylenebis(methylamine)), Class 8, II.
Packaging instruction (1 L): 808 (passenger aeroplane).
Packaging instruction (0,5 L): Y808 (passenger aeroplane).
Packaging instruction (30 L): 812 (cargo aircraft).
Class: 8.



ICAO/IATA label:

Classification as IMDG material for sea transport.

UN number: 3267.
Name on transport document: UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (mixture contains polyoxypropylendiamine and m-phenylenebis(methylamine)), Class 8, PG II, MARINE POLLUTANT.
Class: 8.
Maximum quantity: 1 litre.
EmS: F-A / S-B.
IMO label: -
Packing and stowage: Category B. Stow "Separated from" quarters. "Not in the same area with" acids.
Properties and observations: Causes burns on the skin, eyes and mucous membranes. Reacts violently with acids.

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15. Regulatory information.

EG classification.



EG hazard symbol:

Hazard description:

R – (risk) phrases:

S – (safety) phrases:

C Corrosive.
R22 Harmful if swallowed.
R34 Causes burns.
R36/38 Irritating to eyes and skin.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S1/2 Keep locked up and out of the reach of children.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of water and soap.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S46 If swallowed, seek medical advice immediately and show this container or label.
S60 This material and its container must be disposed of as hazardous waste.
S64 If swallowed, rinse mouth with water (only if the person is conscious).
Additional regulation from EU legislation: Contains epoxy constituents. See information supplied by the manufacturer.

WGK:

Additional warning:

VOC content:

2 (Hazard to water, German regulation).
Contains 2,4,6-tri(dimethylaminomethyl)phenol (index number 603-069-00-0).
Contains none, or almost none, volatile organic compounds.

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16. Other information.

List of relevant R - phrases referred to under headings 2 and 3:

R21/22 - Harmful in contact with skin and if swallowed.

R22 - Harmful if swallowed.

R34 - Causes burns.

R36/38 - Irritating to eyes and skin.

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

History: Date of printing: 20 July 2009.
 Date of previous issue: No previous validation.
 Version: 1.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the properties of the product. It is always the duty of users to determine the applicability of such information and recommendations and the suitability of any products for their own particular purpose.

Safety data sheet according 91/155/EEC - 2001/58/EC.
DRY FLEX® is a trademark of Repair Care International B.V. .