

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
Commercial product name: DRY FLEX[®] SR A
Page: 1 of 13

1. Identification of the substance / preparation and the company / undertaken.

Product name and code: DRY FLEX[®] SR A
Material uses: Component of elastic repair compound.
Identification company: Repair Care International B.V.
Cartografenweg 34
5141 MT 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. Hazard identification.

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

Xi	Irritant.
N	Dangerous for the environment.
R36/38	Irritating to eyes and skin.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The material can cause sensitisation and irritation to the skin, prolonged or repeated exposure can reinforce this impact.

General.

Avoid dust creation from the reacted product. Do not inhale sanding dust from this product as reacted. Use a vacuum or wet clean-up method to remove dusts. Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure.

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
 Commercial product name: DRY FLEX® SR A
 Page: 2 of 13

3. Composition / information on ingredients.

Ingredient	% weight	danger	CAS#	EC#	REACH#
Reaction product: bisphenol-A-(epichlorhydrin)					
Epoxy resin (number average molecular weight < 700)	> 50	Xi; R36/38 R43 N; R51/53	25068-38-6	500-033-5	-
Calcium carbonate	< 40	-	471-34-1	207-439-9	-
Siloxanes and Silicones, di-Me, reaction products with silica	< 10	-	67762-90-7	-	-

The full text of each relevant R phrase can be found in heading 16.

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:	Exposure can cause serious skin irritation, constant pain or reddening of the skin. Rinse with plenty of 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.
Inhalation of sanding dust of the reacted product:	If these become irritated move to a dust free area, drink water and blow nose to remove particulates from nasal passages. Keep the person warm and let him rest. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside and if large amounts are inhaled.
Further medical treatment:	Symptomatic treatment and supportive therapy as prescribed.

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
 Commercial product name: DRY FLEX® SR A
 Page: 3 of 13

5. Fire – fighting measures.

Suitable extinguishing media: CO₂, (alcohol resistant) foam, dry powder, water spray or sand should be used.

Extinguishing media which must not be used for safety reasons: Never use direct water jet.

Unusual fire/explosion hazards: Not classified as flammable. Fire will produce dense black smoke containing hazardous products of combustion. Decomposition products may be a hazard to health. Combustion products may include carbon monoxide and carbon dioxide.

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).

Additional information: Prevent washings from entering the sewer system.

6. Accidental release measures.

Personal precautions: Ensure acid protective clothing and respiratory protection (including self-contained breathing apparatus) is worn when cleaning up spillage. Ventilate and evacuate the area. Can form gasses heavier than air. Danger of skidding.

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.

7. Handling and storage.

Handling: When handling observe the usual precautionary measures for chemicals. Do not inhale vapours and avoid contact with the material. Use only in well-ventilated areas. 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 30 °C and under 5 °C.

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

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

Specific use(s): Very fast hand applied, elastic repair compound.

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
 Commercial product name: DRY FLEX® SR A
 Page: 4 of 13

8. Exposure controls / personal protection.

Exposure limit values:

Ingredient name	Occupational exposure limits UK (OES / MAC – list)
Silicon dioxide	TWA 8 hrs. 0,1 mg / m ³ (as respirable dust, EH40 / 2005 from 1 October 2006)
Calcium carbonate	TGG 8 hrs. 10 mg / m ³ (respirable, total dust) 3 mg / m ³ (respirable) (suppliers value)

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 (> 0,4 mm) 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).

General comment: **The exposure limits, as described above, are based on the inhalation of dust; avoid inhalation of dust from sanding processes of the reacted product from Dry Flex SR A and Dry Flex SR B.**

Health limits and safeguards: Norms for the protection of personnel and exposure limits at the workplace may vary by country. You must keep to the limits applicable to your company. If no instructions or other norms concerning dust exist then a qualified expert in the field of personnel protection may be brought in to analyse the workplace and advise on suitable respiratory equipment to be worn (see further under the reference to Nepsi under heading16).

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
Commercial product name: DRY FLEX® SR A
Page: 5 of 13

8. Exposure controls / personal protection (continue).

General comment (continue):	The exposure limits, as described above, are based on the inhalation of dust; avoid inhalation of dust from sanding processes of the reacted product from Dry Flex SR A and Dry Flex SR B.
Technical safeguards:	Review your applications in order to identify potential sources of sanding dust exposure. Local exhaust ventilation, which collects dust at source, can be used. For example down draft tables, emission controlling tools and materials handling equipment. Keep the workplace clean. Use a vacuum cleaner fitted with a High Efficiency Particle Air (HEPA) filter, avoid brushing and compressed air.
Personnel information and training:	Employees must be trained to handle this product and informed regarding national handling requirements. Personnel checks: Free silicic acid is on the list of agents whose inhalation can cause illness. Employees who work with this product must undergo an annual check consisting of a chest X-ray.
Respiratory protection:	Requires at not sufficient ventilated working places. Suitable self-contained breathing apparatus must be worn if ventilation is insufficient or if company regulations so demand. Eating, drinking and smoking are prohibited in areas where this material is handled and stored. For dust concentrations below the exposure limit value, respiratory protection is not required but FFP2 (mask according to EN149: 2001). respirators may be used on a voluntary basis. For short-term operations where excursions are less than ten times the limit value, use FFP2 respirators. In case of higher concentrations or where the concentration is not known, please seek advice from an expert or wear independent respiratory protection. Review your applications in order to identify potential sources of dust exposure. Local exhaust ventilation, which collects dust at source, can be used. For example down draft tables, emission controlling tools and materials handling equipment. Keep the workplace clean. Use a vacuum cleaner fitted with a High Efficiency Particle Air (HEPA) filter, avoid brushing and compressed air.

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
Commercial product name: DRY FLEX® SR A
Page: 6 of 13

9. Physical and chemical properties.

General information.

Appearance: Liquid.
Colour: White.
Odour: Characteristic.

Important health, safety and environmental information

pH: Not available.
Boiling point: > 100 °C.
Solidification point: < 0 °C.
Flash point: > 100 °C.
Explosive properties: Not available.
Vapour pressure: Not available.
Relative density: 1,74 (water = 1).
Solubility in water: Partly soluble.
Viscosity: Not available.
Vapour density: > 1 (air = 1).
Evaporation rate: Slower than ether.

10. Stability and reactivity.

Stability: Stable at room temperature. Exothermic reactions possible with oxidisers, strong acids or strong alkaline materials. Polymerisation in combination with amines.
Conditions to avoid: Avoid high (> 30 °C) and low (< 5 °C) temperatures.
Materials to avoid: Oxidisers, strong acids, alkaline materials and amines.
Hazardous decomposition products: Unlikely under normal industrial use and at operating temperatures.

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
Commercial product name: DRY FLEX® SR A
Page: 7 of 13

11. Toxicological information.

Acute toxicity from the components:

Product information:	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight \leq 700).
LD ₅₀ (oral, rat):	11,4 g / kg.
LD ₅₀ (dermal, rabbit):	20 mg / kg.
LC ₅₀ (inhalation, rat):	791 mg / m ³ (4 hrs.).

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

Effects on the eyes:	Irritating. Reddening, pain, disturbed vision.
Effects on the skin:	Contact with the preparation may result in contact eczema, sensitisation, skin cracking and swelling. Prolonged or repeated exposure in combination with other epoxy products may damage the skin and may cause irritation eczema. Contains reaction product bisphenol-A-(epichlorhydrin) epoxy resin from which is known that it can lead to allergic contact dermatitis.
Effect on the respiratory organs:	Irritation of mucous membranes and respiratory tract.
Ingestion:	Harmful.

Carcinogenic, teratogenic and mutagenic character:

1) Mutagenicity: Liquid resins based on diglycidyl ether of Bisphenol A (DGEBA), have proved to be inactive when tested by in vivo mutagenicity assays. These resins have shown activity in in vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. The significance of these tests to man is unknown.

2) Carcinogenicity: Recent 2-year bioassays in rats and mice exposed by the dermal route to DGEBA yielded no evidence of carcinogenicity to the skin or any other organs. This study clarifies prior equivocal results from a 2-year mouse skin painting study, which were suggestive, but not conclusive, for weak carcinogenic activity. 3) The International Agency for Research on Cancer (IARC) concluded that DGEBA is not classifiable as a carcinogen (IARC group 3), that is human and animal evidence of carcinogenicity is inadequate.

3) The IARC (International Agency for Research on Cancer) decided DGEBA not to classify as carcinogenic (IARC group 3) based on inadequate test results.

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.

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
Commercial product name: DRY FLEX® SR A
Page: 8 of 13

11. Toxicological information (continue).

Release of silicon dioxide possible due to sanding processes of the reacted product from Dry Flex SR A and Dry Flex SR B.

Effects on the eyes:	Particle matter may cause physical injury to the eye. Excessive exposure to eyes especially when mixed with water can cause caustic burns.
Effects on the skin:	Contains silicon dioxide which may cause light irritation, and may lead to itching and sometimes to light reddening of the skin, particularly in sensitive individuals. In contrast to reactions to other irritating substances this is not a consequence of an allergy or chemical skin damage, but is caused by temporary mechanical effects.
Effect on the respiratory organs:	Immediate effects of dust inhalation may include coughing and minor transient respiratory irritation. Acute silicosis has been reported following exposure to extremely high crystalline silica exposures particularly when the particle size of the dust is very small. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of scleroderma, tuberculosis and kidney disorders. There is no specific treatment for silicosis, the most important measure being to avoid exposure.
Ingestion: Chronic toxicity. Experimental study:	Ingestion may cause irritation to mucous membranes. Animals exposed to very high concentrations of crystalline silica, artificially or by inhalation, have reported fibrosis and tumours (IARC Monographs 42 and 68). Inhalation and intratracheal installation of crystalline silica in rats caused lung cancer. However, studies in other species such as mice and hamsters caused no lung cancer. Crystalline silica also caused fibrosis in rats and hamsters in several inhalation and intratracheal installation studies.
Epidemiology:	Prolonged / repeated inhalation of respirable crystalline silica dust may cause delayed lung injury (silicosis). In evaluating crystalline silica as a cancer risk, the International Agency for Research on Cancer (IARC) reviewed several studies from different industries and concluded that crystalline silica from occupational sources inhaled in the form of quartz, tridymite or cristobalite is carcinogenic to humans (Group 1) [IARC Monograph; vol.68; June 1997]. However, in reaching its conclusion, IARC stated that the carcinogenicity in humans could not be found in all industries reviewed and that carcinogenicity might be dependent on inherent characteristics of crystalline silica or on external factors affecting biological activity (e.g., cigarette smoking) or distribution of its polymorphs.

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
 Commercial product name: DRY FLEX® SR A
 Page: 9 of 13

11. Toxicological information (continue).

Release of silicon dioxide possible due to sanding processes of the reacted product from Dry Flex SR A and Dry Flex SR B (continued).

Clinical picture. Silicosis:	A distinction is made between chronic silicosis ('simple silicosis'), complicated silicosis ('progressive massive fibrosis – PMF'), accelerated silicosis and acute silicosis ('alveolar silico-proteinosis'). Acute silicosis as a result of occupational exposure to high concentrations of free crystalline quartz dust for a limited period of time shorter than several months will be explained in more detail.
Symptoms:	In mild cases there are no symptoms at first. Later on, coughing, shortness of breath and sputum with black mixed in. Upon examination no abnormalities are initially found. Later on there will be auscultation abnormalities. In advanced cases dyspnoea, hypoxemia and signs of right decompensation will occur.
Complications:	CNSLD, emphysema, cor pulmonale, silicotuberculosis and – in very rare cases – the development of Caplan syndrome: 'the combination of a specific form of anthracosilicosis (whereby several large 'necrobiotic' nodules develop in the lungs on a background of simple silicosis) and rheumatoid arthritis'.
Pulmonary function:	Initially restrictive ventilatory abnormalities. At a later stage often obstructive abnormalities, an increased residual volume, diffusion disorders and a strain-related drop in oxygen intake and oxygen pressure.
Chest X-ray:	Multiple, mostly peripheral, shadows in the apex and mid-sections of the lung; these small round shadows are not clearly defined and have a perinodular transparency. They increase in size as the disease progresses and can merge with neighbouring nodules to form larger shadows.

12. Ecological information.

Ecotoxicity from the components.

Product information:	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700).
LC ₅₀ (fish, leuciscus idus):	3,6 mg / l (48 hrs.).
EC ₅₀ (daphnia):	2,8 mg / l (48 hrs.).
EC ₅₀ (algae):	220 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:	Toxic 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).

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
Commercial product name: DRY FLEX® SR A
Page: 10 of 13

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*. WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS. Wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other dangerous substances. Classified as hazardous waste.
Empty containers:	May be reconditioned only after the contents have been completely removed.

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
Commercial product name: DRY FLEX® SR A
Page: 11 of 13

14. Transport information.

Classification as ADR material for road transport.

UN number: 3082.
Proper shipping name: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mixture contains diglycidyl ether of bisphenol A (BPA type epoxy)), Class 9, III.
ADR class: 9.
Hazard no.: 90.
Packaging: III.



ADR label:
Remark:

Supplier makes in normal circumstances use of the complete exemption in accordance with LQ7 and number 3.4 of the ADR (maximum gross content for inner packaging 5 l).

Classification as ICAO/IATA material for air transport.

UN number: 3082.
Proper shipping name: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mixture contains diglycidyl ether of bisphenol A (BPA type epoxy)), Class 9, III.
Packaging instruction (no limit): 914 (passenger aeroplane).
Packaging instruction (30 kg): Y914 (passenger aeroplane).
Packaging instruction (no limit): 914 (cargo aircraft).
Class: 9.



ICAO/IATA label:

Classification as IMDG material for sea transport.

UN number: 3082.
Name on transport document: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mixture contains diglycidyl ether of bisphenol A (BPA type epoxy)), Class 9, PG III, MARINE POLLUTANT.
Class: 9.
Maximum quantity: 5 litre.
EmS: F-A / S-F.
IMO label: -
Packing and stowage: Category A.

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
Commercial product name: DRY FLEX® SR A
Page: 12 of 13

15. Regulatory information.

EG classification.



EG hazard symbol:
Hazard description:

Xi	Irritant.
N	Dangerous for the environment.
R36/38	Irritating to eyes and skin.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.
S2	Keep out of the reach of children.
S24	Avoid contact with skin.
S28	After contact with skin, wash immediately with plenty of water.
S37/39	Wear suitable gloves and eye/face protection.
S51	Use only in well-ventilated areas.
S61	Avoid release to the environment. Refer to special Instructions / safety data sheets.
Additional regulation from EU legislation:	Contains epoxy constituents. See information supplied by the manufacturer.

WGK:

2 (Hazard to water, German regulation).

VOC content:

Contains none, or almost none, volatile organic compounds.

Additional warning:

Contains reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) (index number 603-074-00-8).

SAFETY DATA SHEET

conform 1907/2006/EC

Date of issue: 15 May 2008, version 1
Commercial product name: DRY FLEX[®] SR A
Page: 13 of 13

16. Other information.

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

R36/38 - Irritating to eyes and skin.

R43 - May cause sensitisation by skin contact.

R51/53 - Toxic 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.

Reference:

- Directive 1999/38/EC on the protection of workers from the risks related to exposure to carcinogens at work;
- Agreement on Workers Health Protection through the Good Handling and Use of Crystalline Silica and Products containing it (www.nepsi.eu).

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 regulation (EC) No 1907/2006 of the European parliament and of the council from 18 December 2006 concerning the registration, evaluation, authorisation and restriction of chemicals (REACH).

DRY FLEX[®] is a trademark of Repair Care International B.V. .

Annex.

From the raw materials in this recipe, at the moment of drafting this safety data sheet, no chemical safety reports according to regulation (EC) no. 1907/2006 has been registered.