

USERS SAFETY GUIDE

THE HANDLING OF RESIN AND POLYMER PRODUCTS

DEVELOPERS, MANUFACTURERS AND SUPPLIERS OF RESIN AND POLYMER PRODUCTS

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INTRODUCTION

Rotafix (Northern) Ltd's policy is to develop liquid resin systems with the least hazardous vapour pressure and toxic effects.

There is a continuing policy to provide, wherever possible, suitable water based and/or low flammability resin systems.

Rotafix (Northern) Ltd manufacture, package and distribute a number of resin products. These can be divided into the following categories:

1. Liquid epoxide resins of the D.G.E.B. type and their associated aromatic and aliphatic amine curing agents.
2. Unsaturated polyester resins containing styrene.
3. Moisture curing polyurethane systems containing inflammable solvents such as zylol (xylene) e.g. Joint Sealant.
4. Aqueous dispersions of **SBR, VaC or VA**.

The latter group can generally be considered the least hazardous.

The above items represent the liquid or vehicle item in any package. In addition, there are often separate filler components, i.e. not already incorporated in the liquid. These fillers can contain fine powder particles of a siliceous nature.

SUMMARY OF HAZARDS

1. Danger of irritation due to inhalation of solvents, resins and/or curing agents.
2. Danger of irritation due to the inhalation of fine powder particles.
3. Irritation of the skin or eyes from 1 and/or 2 above.
4. The toxic effects due to oral ingestion.
5. The toxic effects due to skin absorption.
6. Dangers associated with flammability and the corresponding toxic combustion products.

PRECAUTIONS

Handling problems with resin systems can be minimised providing the user follows a few simple rules:

1. Read individual Technical Data Sheets prior to mixing and using specific products.
2. Prevent skin contact whenever possible.
3. At the start of each work shift wear clean protective clothing. If the clothing becomes contaminated, wash before re-use.
4. The suggested protective clothing is as follows:

Overalls, Goggles, Disposable Face Masks, Gloves.
5. Maintain good personal hygiene and cleanliness at all times.
6. Wash thoroughly before smoking, eating and visiting the toilet.
7. Use barrier cream on the hands at the beginning of every working shift.
8. Mix and use the products in well ventilated areas.
9. Do not eat, drink or smoke when mixing or using resins, fillers or solvents.
10. It is recommended that operatives and supervisors be aware of the flammability of solvents and to make available suitable fire extinguishers within the working area.
11. In areas where third parties are likely to be present 'NO SMOKING' notices or other warning signs should be prominently displayed.

SUGGESTED RECOMMENDATIONS

1. ORAL INGESTION
Oral ingestion is highly unlikely unless operatives smoke or consume food at the same time as mixing and/or using resin products.
It is essential that personnel use a cleansing cream followed by soap and water before smoking, eating and drinking.
On return to work, the barrier cream should be re-applied prior to handling of the products.

2. FLAMMABILITY

Non solvent containing liquid epoxy resin products other than the water dispersible types are classed as flammable and will support combustion. However, their flashpoint is in excess of 100°C and, providing judicious handling is used, they should present no serious problem. Rotafix (Northern) Ltd's unsaturated polyester resins are flammable and usually contain styrene. Flashpoint 30°C. They can, therefore, be considered more hazardous than the epoxy resin systems.

Rotafix's polymer systems are not inflammable: in their aqueous state they will not support combustion.

Rotafix (Northern) Ltd's polyurethane pre-polymers contain highly flammable solvents with a flashpoint below 30°C.

In the event of fire, use carbon dioxide dry chemical or foam extinguisher.

3. PROTECTION OF SKIN

With any chemicals it is advisable to avoid skin contact for two reasons:

- a) Certain chemicals, including some solvents used with resins, can be absorbed through the skin.
- b) It has been established that certain liquid resin systems and their associated curing agents are a potential irritant and the degree of irritancy depends upon the particular product and on the individual concerned.

If an operative or potential operative has a known record of skin sensitivity, he/she should not be exposed to liquid epoxy resin system.

Before handling resin products, the hands and arms should be protected with a suitable barrier cream. In addition, rubber gloves should be worn. If gloves are used for extended periods, they can cause excessive perspiration and this increases skin sensitivity. It is recommended, therefore, that gloves are removed at suitable intervals, hands washed with soap and water and fresh barrier cream applied.

In the event that an accident occurs and resin is spilt on the operative or clothing, immediate action should be taken to remove the resin by wiping with clean cloths or paper towels and removing the articles to a suitable sealed waste container. The remainder of the resin should be removed from the skin with a suitable cleansing agent or soap and water.

UNDER NO CIRCUMSTANCES SHOULD STRONG SOLVENTS SUCH AS ACETATES OR KETONES BE USED

AS:

- a) they are potential irritants in themselves and
- b) they remove the natural and protective oils from the skin.

4. PROTECTION OF THE EYES

The eyes are possibly the most sensitive part of the body and it is most important to protect them during the mixing and application of the resin products. Splashing during mixing can occur, particularly when mechanically blending two components of differing viscosity.

Solvents and some curing agents are of low viscosity and splash readily. **ALWAYS** wear goggles or visors when mixing. In the event that the eyes become contaminated, they should be washed with copious amounts of clean water. It is recommended that an eye wash bottle be maintained in areas where resin work is carried out. Medical attention should be sought without delay whenever the eyes become contaminated.

ROTAFIX (NORTHERN) LTD'S USER'S SAFETY GUIDE IS BASED ON MANY YEARS EXPERIENCE IN THE PRACTICAL USE AND APPLICATION OF RESIN SYSTEMS. IT IS NOT INTENDED TO BE A COMPREHENSIVE OR EXHAUSTIVE SET OF INSTRUCTIONS SINCE CIRCUMSTANCES OF INDIVIDUAL APPLICATIONS ARE OUTSIDE THE CONTROL OF ROTAFIX.

INDIVIDUALS MAY FIND IT NECESSARY TO TAKE ADDITIONAL MEASURES IN ORDER TO PROVIDE THE APPROPRIATE DEGREE OF SAFETY.

ROTAFIX (NORTHERN) LTD CANNOT ACCEPT LIABILITY OR RESPONSIBILITY FOR PERSONAL INJURY, LOSS OR DAMAGE THAT MAY BE CAUSED AS A RESULT OF THE STORAGE, MISUSE OR HANDLING OF ANY OF THE PRODUCTS SUPPLIED.



At the date of preparation of this information, the following companies supply general and specialist products for use when working with resin:

BARRIER CREAMS, SKIN CONDITIONING CREAMS AND RESIN REMOVING CREAMS:

Hayley Birmingham
Unit 40 Elmdon Trading Estate
Bickenhall Lane
Birmingham, B37 7HE

Tel: +44 (0)121 782 8877
Fax: +44 (0)121 782 8988
e-mail: birmingham@hayley-group.co.uk
www.harley-group.cok.uk

Newhall Janitorial
Maindy Bridge
73 North Road
Cardiff, CF1 3TF

Tel: +44 (0) 2920 313313
Fax: +44 (0) 2920 221224
e-mail: hygeine@newhall.co.uk
www.newhall.co.uk

GOGGLES, FACE MASKS AND RESPIRATORS:

CENOR Industrial Supplies
Moorgate Rd.
Dereham
Norfolk, NR19 1NT

Tel: +44 (0) 1362 695004
Fax. +44 (0) 1362 698047
e-mail: sales@cenor.co.uk
www.cenor.co.uk

Greenham Trading Ltd
Unit A2, Gellihirion Industrial Estate
Pontypridd, Mid Glam
CF37 5EX

Tel: +44 (0) 1443 843011
Fax: +44 (0) 1443 842577
e-mail: national.sales@greenham.co.uk
www.greenham.com

PROTECTIVE CLOTHING/FOOTWEAR:

CENOR Industrial Supplies
Moorgate Rd.
Dereham
Norfolk, NR19 1NT

Tel: +44 (0) 1362 695004
Fax: +44 (0) 1362 698047
e-mail: sales@cenor.co.uk
www.cenor.co.uk

Beeswift Limited
Brewins Way, Hurst Business Park
Brierley Hill
West Midlands, DY5 1UY

Tel: +44 (0)1384 480055
Fax: +44 (0)1384 481056
e-mail: sales@beeswift.com
www.beeswift.com

DISPOSABLE TISSUES:

Georgia Pacific Ltd
Mansel Way
Horrich, Bolton
BL6 6JL

Tel: +44 (0) 1204 673300
Fax: +44 (0) 1204 673301
www.gp.com

Censol Limited
New Tythe Street, Long Eaton
Nottingham, NG10 2DL

Tel: +44 (0) 115 972 7070
Fax: +44 (0) 115 946 1107
e-mail: sales@censol.freeserve.co.uk
www.censol.co.uk

FIRE EXTINGUISHERS:

FPS Fire Protection Limited
Waterloo Road, Bristol BS2 0PE

Tel: +44 (0) 117 955 3896
Fax: +44 (0) 117 935 1605
Email: sales@firemarkext.co.uk
www.firemarkext.co.uk

Nu-Swift International Ltd
Elland, Yorkshire, HX5 9DS

Tel: +44 (0) 1422 372852
Fax: +44 (0) 1422 379569
e.mail: customer.service@nuswift.co.uk

INFORMATION ON HEALTH & SAFETY AT WORK MAY BE OBTAINED FROM H.M.S.O. BRANCHES IN MOST MAJOR CITIES.

IN CASE OF ANY DIFFICULTY, PLEASE CONTACT ROTAFIX (NORTHERN) LTD WHO STOCK MANY OF THESE ITEMS.

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