



## Hazards from dyes and chemicals in textile finishing: A brief guide for employees

### Introduction

Some dyes and chemicals used in textile finishing can be harmful to your health. But you will not be at risk if you and your employer take the right precautions. Other Information Sheets in this series give your employer advice about the actions they need to take. This sheet tells you what you can do to protect yourself from harm,

### General approach

Some dyes and chemicals are recognised as hazardous to health; others are not. However, we cannot be sure that we understand all the health hazards for the full range of dyes on the market, so it is wise to take precautions when handling any of them,

#### DO..

- Work as cleanly as possible, to protect yourself and others in the area.
- Read the label
- Get more information from your employer about the chemicals you use and how to handle them safely. Hazardous substances will have a safety data sheet supplied with them.
- Wash your hands thoroughly before eating, drinking or smoking.
- Wear the personal protective equipment provided and report any defects.
- Inform your GP that you work with dyes and chemicals if you suffer ill health.

#### DON'T..

- Don't eat, drink or smoke in the area where chemicals are handled.

### Scalds and burns from chemical splashes

Hot liquids, acids and other chemicals labelled corrosive cause many scalds and burns.

#### DO..

- Wear chemical-resistant gloves, overalls or an apron, work boots and eye protection (preferably a visor which extends and tapers under the chin).

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- Wear your overall or apron over the top of your boots to stop liquids spilling inside.
- Add acids and other corrosive chemicals to water, never the other way round.
- Wash any splashes off your skin immediately with plenty of water.
- Use a pump to decant from chemical containers rather than tipping the containers.

#### DON'T..

- Don't leave lids off lidded buckets when transporting chemicals.
- Don't continue to work in gloves or boots into which even a small amount of corrosive has spilled. The chemical may slowly burn your skin without your realising it.

### Burns from uncontrolled chemical reactions

Some chemical mixes will react violently, generate a lot of heat, or produce toxic gases.

#### DO..

- Use clean, dry scoops and buckets.
- Keep acids and alkalis apart.
- Keep oxidising and reducing agents apart.
- Take care with 'Hydros'. Keep it dry in the store. If you are adding it to a vessel, make sure it is well mixed in plenty of water.

### Irritation to eyes, nose and breathing passages

Irritant chemicals include formaldehyde-based resins, ammonia, acetic acid, a few optical whiteners and shrink-resist finishes, soda ash and bleach. People exposed to these may suffer skin irritation, itchy or stinging noses, sneezing and sore eyes.

#### DON'T..

- Don't leave container lids off chemicals which give off vapours such as ammonia.

## Dermatitis

Dermatitis is the name given to a range of skin complaints. Signs are a skin rash, scaling and bleeding, often on the hands and forearms. Wet working conditions and use of strong chemicals makes dermatitis a real risk in your industry. If left untreated, dermatitis may become so severe that you have to change jobs.

### DO . . .

- Keep chemicals off your skin.
- . Use a conditioning cream after washing.
- . Report even a minor skin rash to your employer and seek medical advice.

### DON'T. .

- Don't wash dye stains from your skin with neat hypochlorite bleach. Use a proprietary cleansing cream or sodium hydrosulphite solution. If you have to use dilute bleach for a very stubborn stain, neutralise the skin afterwards with sodium hydrosulphite and rinse thoroughly. Alternatively, let the stain wear off naturally.

## Other toxic effects

Watch out for substances classified as Toxic, which carry an orange label with a skull and crossbones, or Harmful, which carry an orange label with a black cross and the word 'Harmful'. The label will tell you whether the hazard to health arises from swallowing or inhaling the substance, or absorbing it through your skin. The safety data sheet should tell you what the ill health effects could be.

## Respiratory sensitisation

Some people have developed an allergy to certain reactive dyes. Exposure to even small amounts of these dyes causes them to suffer a severe reaction. Usually this affects the airways and is called respiratory sensitisation, but it may affect the skin. People may become sensitised straight away or after years of exposure to reactive dyes. The condition is irreversible.

Early symptoms, which can show up after work each day, can include:

- . itching, watering eyes;
- . unusual breathlessness or wheezing;

- sneezing, or blocked nose;
- irritating skin rash.

You may think these symptoms are occurring for other reasons, but it is very important that you check to make sure. Symptoms of sensitisation usually get better when you are away from work over a weekend or holiday.

### DO. . .

- Report any of the above symptoms to your employer straight away. Seek medical advice
- Tell the doctor or works nurse that you work with reactive dyes.
- Dispense reactive dyes under local exhaust ventilation, for example in a down-flow booth.
- . Seek more advice from your employer.

## Cancer

A small number of dyes, based on the chemical benzidine, are thought to possibly cause cancer. Most firms are now using substitutes for these dyes. Ask your employer if they are still used in your works. The risk from these dyes may increase if they are treated with reducing agents.

## Further information

Textiles Information Sheets are available from the Textiles, Clothing and Laundries NIG, HSE, 8 St Paul's Street, Leeds LS1 2LE. Tel: 0113 283 4200. They are also available from HSE Books.

HSE priced and free publications are available by mail order from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 6FS Tel: 01787 881165 Fax: 01787 313995.

HSE priced publications are also available from good booksellers.

For other enquiries, ring HSE's InfoLine Tel: 0541 545500, or write to HSE's Information Centre, Broad Lane, Sheffield S3 7HQ.

This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

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