

This leaflet is aimed at employers and employees in industries where hydrofluoric acid is used. It provides information on:

- health effects;
- precautions to be taken when working with hydrofluoric acid;
- first aid procedures to be followed in cases of hydrofluoric acid poisoning;
- first aid training.

Health effects

Hydrofluoric acid is corrosive. It can cause severe burns to the skin and eyes. If it comes into contact with skin, you may not feel pain at once.

Hydrofluoric acid is also highly irritating to the respiratory system and very toxic if swallowed.

Precautions

The Control of Substances Hazardous to Health Regulations 1999 (COSHH) apply. A COSHH assessment should be completed. Consider the use of safer alternatives. If there are no suitable alternatives, the assessment should detail appropriate precautions to be taken when using hydrofluoric acid, which include using a safe system of work. Employers should ensure that employees are given adequate information and

training on the hazards to health posed by hydrofluoric acid, and the precautions to take to avoid them.

Employees should:

- always use the protection provided;
- always wash gloves and other impervious clothing before removing them;
- test gloves for pinholes using a method advised by the manufacturers (this might be done by filling them with water, before drying and putting them away ready for use again), discarding gloves that are not sound;
- always wash their hands before leaving the work area.

First aid

Urgent action is required. Obtain immediate medical attention.

When giving first aid, protect yourself and the casualty from further exposure.

Casualties should be sent to hospital as soon as possible (see opposite). In all cases, the hospital should be informed of the cause of injury.



Skin contact

- Remove contaminated clothing while protecting your hands with suitable gloves.
- Flood the skin with plenty of water for at least 5-10 minutes.
- Apply calcium gluconate gel on and around the affected area and continuously massage it into the skin until at least 15 minutes after pain is relieved. Cover the area with a dressing soaked in the gel and lightly bandage. These procedures can be continued during transit to hospital.
- Send to the Accident and Emergency Department.

Eye contact

- Flush the eye with water for at least 20 minutes. This can be continued during transit to hospital.
- Send the casualty to the Accident and Emergency Department or local Eye Casualty Department.

Gassing

- Remove the casualty from the contaminated area and place in fresh air.
- If necessary, resuscitate the casualty.
- If suitably trained, give oxygen.
- Send to the Accident and Emergency Department.

Swallowing

- **Never** attempt to induce vomiting.
- If the casualty is **conscious**, rinse out their mouth with water.
- Send to the Accident and Emergency Department.

First aid training

It is the responsibility of the employer to ensure there is an adequate number of employees on site, trained in appropriate first aid procedures.

Additional training in first aid procedures to be used for casualties with hydrofluoric acid poisoning is recommended. This can be undertaken as an extension to basic training in first aid at work or as a separate course, and does not need the approval of HSE. The standard certificate may be endorsed to verify that special hazard training has been received.

Further reading

Basic advice on first aid at work INDG215 (rev2)
HSE Books 1999. (Free leaflet, also available in priced packs of 20, ISBN 0 7176 2423 4.)

General COSHH ACOP (Control of substances hazardous to health) and Carcinogens ACOP (Control of carcinogenic substances) and Biological agents ACOP (Control of biological agents). Control of Substances Hazardous to Health Regulations 1999. Approved Codes of Practice (Third edition) L5
HSE Books 1999 ISBN 0 7176 1670 3

First aid at work. The Health and Safety (First-Aid) Regulations 1981. Approved Code of Practice and Guidance L74 HSE Books 1997 ISBN 0 7176 1050 0

First aid at work: Your questions answered INDG214
HSE Books 1997. (Free leaflet, also available in priced packs of 15, ISBN 0 7176 1074 8.)

While every effort has been made to ensure the accuracy of the references listed in this publication, their future availability cannot be guaranteed.

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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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Hydrofluoric acid poisoning



Recommendations on
first aid procedures