



National
Operational
Guidance

Control measure

**Substance identification: Corrosive
materials**



NFCC
National Fire
Chiefs Council

Developed and maintained by the NFCC



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Control measure knowledge

This control measure should be read in conjunction with National Operational Guidance – Hazardous materials: Substance identification.

Corrosive materials can be identified in a number of ways:

- UN GHS/CLP label
- UN hazard warning diamond
- Safety data sheet (SDS) as a UN Class 8 corrosive material
- Name (e.g. sulphuric acid, caustic potash)
- Testing with litmus or pH paper/equipment

The corrosive nature of a material can be established practically by testing the solution with either litmus paper or pH paper. This is most easily done if the unknown material is in a liquid state but damp paper can be used on gases and solids although the results should be used with caution.

The following symbols are likely to be seen in relation to corrosive hazards, For further information on the categories and labelling of corrosive materials see A foundation for hazardous materials.



Materials with the primary hazard of being 'corrosive' will be assigned to GHS/UN hazard class 8. It covers substances that attack tissue on contact, or damage other materials, by chemical action and may also cause other hazards such as corrosive vapours or toxic gases.

Most corrosives encountered are either acids, bases (or alkalis) or salts but a number of other hazardous materials may be corrosive as a secondary or tertiary hazard.

The effects of corrosive materials may take some time to become evident; this should be considered when looking for signs of corrosion. Strong alkalis and some acids have a latent period

before a feeling of burning on the skin is experienced, by this time the damage is already done. Any corrosive materials should be washed off immediately after contact using copious amounts of water.

Strategic actions

Fire and rescue services should:

- Have procedures to enable responders to safely recognise and protect people from corrosive materials

Tactical actions

Incident commanders should:

- Use signs, labels, markings and container types to identify the presence of corrosive materials
- Use detection equipment to identify and monitor any corrosive materials involved
- Identify the location, physical state (solid, liquid, gas), type, quantity and corrosivity of the released material
- Contact and liaise with corrosive product specialists
- Consider testing a small sample of the corrosive material with pH paper to help assess its hazards
- Assess the risk of fire or flammable/explosive atmospheres from the potential production of hydrogen gas through reaction of corrosive materials with metals. See Physical hazards – [Flammable vapours: Unignited](#).