

Substance	Hazard	Comment
Concentrated sulfuric(VI) acid	CORROSIVE	DANGER. It causes severe skin burns and eye damage. It reacts violently, becoming very hot, when mixed with water. For a 15-minute exposure, the vapour concentration in the atmosphere should not exceed 0.15 mg m <sup>-3</sup> .
Moderately concentrated sulfuric(VI) acid ( <i>if 1.5 M or more</i> ) Includes acid used in car batteries.	CORROSIVE	DANGER. It causes severe skin burns and eye damage.
Moderately dilute sulfuric(VI) acid (if less than 1.5 M but 0.5 M or more)		WARNING. It may irritate the eye and skin.
<b>Dilute sulfuric(VI) acid</b> ( <i>if less than 0.5 M</i> )	Currently not classified as hazardous	Dilute acid may still cause harm to the eyes or the skin. Treat as for more concentrated samples. For many activities in school science, 0.4 M is adequate.

## Typical control measures to reduce risk

- Use the lowest concentration possible.
- Use the smallest volume possible.
- Wear eye protection; goggles for concentrated acids.
- Add the concentrated acid slowly to cold water (or preferably ice) when diluting, never the reverse; stir frequently to ensure good mixing.

## Assessing the risks

- What are the details of the activity to be undertaken? What are the hazards?
- What is the chance of something going wrong? eg hazardous products are formed in reactions with the acid or corrosive fumes are produced if concentrated acid is over-heated.
- How serious would it be if something did go wrong? eg skin and eyes can be seriously burned if not treated quickly.
- How can the risk(s) be controlled for this activity? eg can it be done safely? Does the procedure need to be altered? Should goggles or safety spectacles be worn?

## **Emergency action**

In all emergency situations, alert the responsible adult immediately. Be aware that actions may include the following:

- In the eye Irrigate the eye with gently running tap water for at least 20 minutes. Call 999/111.
- In the mouth/swallowed Do no more than rinse and spit with drinking water. Do **not** induce vomiting. Call 999/111.
- Spilt on the skin or clothing Remove contaminated clothing. Quickly use a dry cloth or paper towel to wipe as much liquid off the skin as possible. Irrigate the affected area with gently-running tap water for at least 20 minutes. If a large area is affected or symptoms occur, call 999/111.
- Spilt on the floor, bench, etc
  Wipe up small amounts with a damp cloth and rinse it well.
  For larger amounts, and especially for (moderately) concentrated acid, cover with mineral absorbent (eg, cat litter) and scoop into a bucket. Neutralise with sodium carbonate. Rinse with plenty of water.