




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^{-3} .
Moderately-concentrated sulfuric(VI) acid (If 1.5 M or more) 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)	 IRRITANT	WARNING. It may irritate the eye and skin.
Dilute sulfuric(VI) acid (If less than 0.5 M)	LOW HAZARD	It may still cause harm in the eyes or in a cut. 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 for all but the most-dilute solutions; goggles for concentrated acids.
- Wear protective gloves if anything more than tiny amounts of concentrated acid is handled.
- **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 the eye** Flood the eye with gently-running tap water for 10 minutes. Consult a medic.
- **Swallowed** Do no more than wash out the mouth with drinking water. Do **not** induce vomiting. Consult a medic.
- **Spilt on the skin or clothing** Remove contaminated clothing. Especially with concentrated acid, quickly use a *dry* cloth or paper towel to wipe as much liquid as possible off the skin. Then drench the skin with plenty of water. If a large area is affected or blistering occurs, consult a medic.
- **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.