### Sulfuric(VI) acid

<table>
<thead>
<tr>
<th>Substance</th>
<th>Hazard</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentrated sulfuric(VI) acid</td>
<td>![CORROSIVE]</td>
<td>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.</td>
</tr>
<tr>
<td>Moderately-concentrated sulfuric(VI) acid (If 1.5 M or more)</td>
<td>![CORROSIVE]</td>
<td>DANGER. It causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Includes acid used in car batteries.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderately-dilute sulfuric(VI) acid (If less than 1.5 M but 0.5 M or more)</td>
<td>![IRRITANT]</td>
<td>WARNING. It may irritate the eye and skin.</td>
</tr>
<tr>
<td>Dilute sulfuric(VI) acid (If less than 0.5 M)</td>
<td>![LOW HAZARD]</td>
<td>It may still cause harm in the eyes or in a cut.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For many activities in school science, 0.4 M is adequate.</td>
</tr>
</tbody>
</table>

### 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.