

# Glutaraldehyde

Glutaraldehyde is a common chemical used in a variety of ways. It is used as a biocide, most commonly in disinfectants, as a hardener in X-ray film processing, as a fixing agent in electron and light microscopy, and in tanning.

NICNAS assessed glutaraldehyde in July 1994. These are the main findings of that assessment.

A product containing more than 0.1% glutaraldehyde is classed as a Hazardous Substance. Glutaraldehyde is not classified under the Australian Dangerous Goods Code. However, solutions of more than 25% glutaraldehyde are corrosive and would fit into Class 8 of the Code. Lower concentrations meet the classification for 6.1 (b) substances.

Glutaraldehyde poisoning can occur through the skin, swallowing or by inhalation. The main problem with glutaraldehyde is that sensitivity can build up with repeated exposure.

Contact with solutions containing 1% or more glutaraldehyde and inhalation of glutaraldehyde vapours is the most common route for poisoning.

Signs of glutaraldehyde poisoning include skin irritation or allergic dermatitis. Eye irritation, occupational asthma and irritation to the nose and throat occur from breathing in the vapours.

## RECOMMENDATIONS

Avoid contact with skin and avoid breathing vapours.

When used as a disinfectant, a fume cupboard and local exhaust ventilation must be used. This is particularly relevant to the hospital and health care industry.

Avoid using products containing glutaraldehyde as sprays. Where such products must be used, correct control measures should be taken and the product should be labelled, CAUTION: AVOID BREATHING SPRAY.

Where glutaraldehyde is mixed or handled in large quantities, the processes should be enclosed.

Operations using glutaraldehyde in X-ray film processing should be enclosed. Automatic mixers and automatic processors with exhaust outlets should be used where possible.

Where there is a significant risk of inhalation of glutaraldehyde vapour an atmospheric monitoring program should be carried out.

Glutaraldehyde must not be used for surface disinfection.

Substitutes for glutaraldehyde as a biocide should be identified with care – many are more hazardous and less effective against micro-organisms.

All workers using glutaraldehyde should be trained in safe work procedures and where necessary appropriate personal protective equipment (PPE) should be used.

The national exposure standard is 0.1 ppm over 15 minutes (peak limitation).

More information on glutaraldehyde can be found in the Material Safety Data Sheet available from the supplier. A comprehensive source of information is the detailed assessment of glutaraldehyde published by the National Industrial Chemical Notification and Assessments Scheme (NICNAS). This is available free of charge by calling 1800 638 528. More information on the use of industrial chemicals can be found at the NICNAS website: [www.nicnas.gov.au](http://www.nicnas.gov.au)