


# Acrylamide



Acrylamide is imported into Australia for use in the manufacture of other chemicals known as polyacrylamides. Polyacrylamides are used in wastewater, sewage and water treatment, in surface coatings and adhesives, textile dyeing, leather processing, paper and cardboard manufacture and in cosmetics. Smaller amounts of acrylamide are used by research laboratories. Acrylamide is not available to the general public, but acrylamide-based polymers containing small residual levels of the chemical are present in various consumer products.

NICNAS conducted a full risk assessment of acrylamide and the report was published in May 2002. These are the main findings of the assessment.

Serious health effects can occur through ingestion of, or skin contact with, acrylamide, or by inhalation of its dust, powder or vapour. Acrylamide can cause skin and eye irritation and repeated exposure may cause nerve damage. Sensitivity can build up with repeated exposure to acrylamide. Studies show that the chemical may cause cancer and damage the genes. Acrylamide may impair fertility.

Risk to the general public of exposure to acrylamide is low.

## RECOMMENDATIONS

To reduce the risk to workers:

- Avoid exposure to acrylamide by substituting a safer chemical where possible;
- Substitute acrylamide liquids for solid where possible;
- Conduct personal air monitoring and health surveillance at workplaces, particularly where crystalline acrylamide is used;
- Install local exhaust ventilation in areas where acrylamide is detected during monitoring to minimise exposure, and
- Use appropriate full-form personal protective equipment (PPE).

Acrylamide is a hazardous substance. It is listed in the NOHSC *List of Designated Hazardous Substances* and is classified in Class 6.1 under the Australian Dangerous Goods (ADG) Code. Like many solids, acrylamide crystals can generate dusts that are flammable in air and can explode in the presence of an ignition source. The *Australian Drinking Water Guidelines* stipulate a limit for acrylamide in drinking water of 0.2 µg/L. The national exposure standard is 0.03 mg/m<sup>3</sup> (averaged over 8 hours) with a skin notation, indicating that special measures may be required to prevent absorption through the skin.

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

