

Short Chain Chlorinated Paraffins (SCCPs)

Short chain chlorinated paraffins (SCCPs) are mainly used in extreme pressure lubricants in the metal processing industry. They are also used in fillers or sealers, glues and coating materials used in the building industry, and in rubber and leather treatments.

NICNAS conducted a preliminary assessment of SCCPs in June 2001. The assessment found that there was no need to conduct a full risk assessment for occupational and public health but more work is needed for the environment. Here are the main findings of that report.

SCCPs may enter the body from inhalation, swallowing and some skin contact. SCCPs are not well absorbed into the human body.

There are no short-term health effects but it is possible that there may be serious long-term health effects. Animal studies suggest that SCCPs might cause cancer but there is no information available for humans.

ENVIRONMENTAL EFFECTS

SCCPs have the potential to be released into the environment where they persist for long periods, building up in living organisms. They may be transported great distances through the air.

Release into the environment can occur at almost all stages of the manufacture, transport, use and disposal of SCCPs and products containing SCCPs. In particular, SCCPs in extreme pressure lubricants used in metal working fluids in small metal workshops are commonly disposed of into the sewer system, instead of being properly disposed of by a waste contractor.

SCCPs are not toxic to fish but are highly toxic to invertebrates living in the water. SCCPs are highly toxic to algae. It is not known if SCCPs affect sediment dwelling organisms.

The preliminary assessment determined that a full risk assessment needs to be performed for the metal work industry to estimate the environmental risk.

RECOMMENDATIONS

Since SCCPs are a category 3 carcinogen, use of the chemicals should be avoided or reduced to the lowest possible levels.

Inhalation of SCCPs is possible when used at high temperatures, as a spray and as metal working fluids.

Enclosure and localised exhaust systems should be used in these situations.

Suppliers should update their MSDS and labels to state the environmental risks and give the health risks phrases listed below.

SCCPs are not currently classified as Hazardous Substances. However, the preliminary assessment recommended that they be classified as soon as possible.

The report recommends that the following risk phrases are required:

R40 possible risk of irreversible effects (Carcinogen Category 3).

R50/53 very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

No national exposure standard has been set for SCCPs. However as a possible carcinogen, exposure should be kept as low as possible.

SCCPs are not listed in the Australian Dangerous Goods Code or Poisons Schedule.

More information on SCCPs can be found in the Material Safety Data Sheet available from the supplier. A comprehensive source of information in Australia is the detailed assessment of SCCPs published by the National Industrial Chemicals Notification and Assessment Scheme (NICNAS). This is available free of charge on the NICNAS website or by calling 1800 638528. More information on the use of industrial chemicals can be found at the NICNAS website: www.nicnas.gov.au