

Safety and health alert

07/10 TGIC usage in powder coating

Incident

A recent proactive project conducted by the Manufacturing Branch of WorkSafe WA into the powder coating industry in both metro and regional Western Australia found that in many cases, hazardous Triglycidylisocyanurate (TGIC) containing powders are being used without employers or employees understanding the related health issues and subsequent control measures that are required to minimise risk.

Contributing factors

- (TGIC) is added to powders as a cross-linking agent to enhance durability and finish. It is known to increase the sensitivity of the skin and respiratory tract, is toxic by ingestion and inhalation and may cause serious eye damage. It is also genotoxic, whereby exposure may cause heritable genetic damage.
- Workers may come into contact with TGIC during the filling of hoppers, spraying and touch up spraying, emptying and cleaning extraction ventilation and the cleaning of booths.

Recommendations

1. Use TGIC-free powders where practical.
2. Employers should be fully aware of the requirements in the powder coating section of the *Spray Painting Code of Practice* and ensure that either these guidelines are followed, or that alternative practices when spraying with TGIC powders afford the same level of protection to their employees or better.
3. Workers using TGIC powders need to be trained on the health effects of TGIC, the ways to minimise exposure and the use and maintenance of respiratory protective equipment and personal protective equipment.
4. Spraying, where practicable, should be conducted in a booth. Refer to Australian Standard *AS 3754 – Safe application of powder coatings by electrostatic spraying* for more information.
5. Safe work practices are essential to minimise the risk of exposure. These include implementing good hygiene practices, powder handling methods that minimise dust and the use of disposable overalls or on-site laundering facilities.
6. A powered air purifying respirator (supplied air respirator) should be worn and maintained in accordance with the relevant Australian Standards.

Further information

- WorkSafe WA Commission [Code of Practice –Spray Painting 2009](#)
- Occupational Safety & Health Regulations 1996 – Regulation 3.101
- Australian Standard *AS 3754 – Safe application of powder coatings by electrostatic spraying*

Further information can be obtained from WorkSafe's internet site www.worksafe.wa.gov.au or by contacting customer service on 1300 307 877 or email safety@commerce.wa.gov.au

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