



RECLASSIFICATION OF MDI

Background

MDI (Methylene diphenyl diisocyanate) is an aromatic isocyanate used as a reactor with polyols in the manufacture of polyurethane resins for over 40 years. The percentage of MDI of the total “resin product” is approximately 9% to 30% depending on type of product, but typically for a 9 mm polyurethane screed, MDI accounts for 9-10% of the overall product.

Reclassification – the facts

The reclassification of MDI followed a series of studies involving animal testing in artificial aerosol environments. At 300 times the Occupational Exposure Level, using a specially prepared finely dispersed respirable aerosol ($\leq 10\mu$ particle size), a few animals in the studies developed benign tumours with long term exposure (2 years).

It should be noted that:

- MDI is not aerosolised in flooring applications
- MDI has very low vapour pressure

Occupational Exposure

A number of studies and tests have been undertaken to measure potential airborne exposure during the mixing and laying process of polyurethane resin flooring. All results obtained confirm that less than 3% of the Occupational Exposure Limit (OEL) is reached during an 8 hour working period.

Details on the studies undertaken can be obtained from:

- Health & Safety Executive : HSL/2005/60 www.hse.gov.uk
- ISOPA (European Di-isocyanate Polyol Producers Association) www.isopa.org

Summary

- The reclassification of MDI has no impact on workplace health & safety beyond what is good practice today.
- There is no risk of aerosol isocyanate in normal use of the products as flooring materials
- The UK Occupational Exposure Limit (OEL TWA) = 0.02mg/m³ in an 8 hour period, test results show less than 3% of the OEL during an 8 hour working period.

Full risk assessment should always be carried out to ensure best practice.

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