

December 16, 2010

The following Risk Characterization is valid for TDI mixed isomers (CAS 26471-62-5 , EC 247-722-4)

and modified prepolymers based on these

Please notice, the OELs (Occupational Exposure Limits) remain in force parallel to the following PNECs and DN(M)ELs

PNEC = Predicted No Effect Concentration

DN(M)EL = Derived No (Minimal) Effect Level

Polymeric raw materials like PMDI, many Polyols or TDI based pre-polymers do not have exposure scenarios because of an exemption provided by the regulator

In context of site - safety and for responsible care reasons we advice to treat classified classified Prepolymers made with the a.m. TDI's like these Isocyanate

The risk characterization of TDI mixed isomers has been conducted based on the PNECs and DNELs in the following tables.

PNEC = Predicted No Effect Concentration
used in the modelling

| Compartments | PNEC |
|--------------------------------|-----------------------|
| Freshwater (mg/l) | 0.013 |
| Marine water (mg/l) | 1.25•10 ⁻³ |
| Freshwater sediment (mg/kg dw) | n.r. |
| Marine sediment (mg/kg dw) | n.r. |
| Soil (mg/kg dw) | > 1.0 |
| Sewage Treatment plant (mg/l) | > 1.0 |

DNEL = Derived No Effect Level
used in the risk assessment

DNELs were not derived for the general population as consumer exposure to TDI mixed isomers is as yet unidentified

| DNELs for workers | |
|-------------------------------------|------------------|
| Route | DNEL |
| Acute - systemic effects | |
| Inhalation (mg/m ³) | 0.14 |
| Dermal (mg/kg bw/day) | not quantifiable |
| Acute - local effects | |
| Inhalation (mg/m ³) | 0.14 |
| Dermal (mg/cm ²) | not quantifiable |
| Long-term - systemic effects | |
| Dermal (mg/kg bw/day) | not quantifiable |
| Inhalation (mg/m ³) | 0.035 |
| Long-term - local effects | |
| Dermal (mg/cm ²) | not quantifiable |
| Inhalation (mg/m ³) | 0.035 |