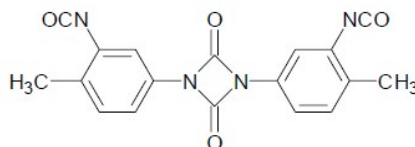




Thanecure® T9 SuperFine

Thanecure® T9 Superfine is the dimer of 2,4-toluene diisocyanate (TDI). It is a *polyfunctional* isocyanate used as a vulcanizing agent for specialty millable polyurethane rubbers, as a crosslinker for adhesives and as an adhesion promoter for rubber-to-fabric bonding.



Product Description and Typical Properties

| | |
|------------------------|---|
| Chemical Composition | Dimeric 2,4-toluene diisocyanate |
| Molecular weight | 348 |
| Density | Approximately 1.48 g/cc |
| Melting Point | Minimum 145°C |
| Monomer (TDI) Content | Less than 0.1% |
| Screens | Minimum 99% through 325 mesh |
| Particle size, Malvern | Minimum 75% less than 10 microns |
| Appearance | Fine, white powder |
| Packaging | 50 lb (22.7 kg) box |
| Storage Stability | 24 months from date of manufacture, under dry and cool conditions |

Functionality

Under mild reaction conditions, i.e. at up to ~ 130° C in the absence of basic catalysts, it is primarily bifunctional, with a molecular weight of 348. Under more severe conditions (either at temperatures above 140/150° C or with the aid of highly basic catalysts at temperatures above 90° C) it remains primarily bifunctional but with a molecular weight of 174, as the central uretdione group splits to form monomeric TDI.

NOTE: Please refer to the Safety Data Sheet and to the available literature regarding the handling of TDI.

Applications

- Adhesion promoter for rubber-to-fabric bonding (polyester, aramid, polyamide). Applications include tire cord, conveyor belts, drive belts, hose, coated fabrics.
- Adhesion promoter for PVC-to-fabric bonding (polyester, aramid, polyamide). Applications include coated fabrics, conveyor belts.
- Vulcanizing agent for polyurethane rubbers like Millathane® 26, particularly when a high hardness is desired. Applications include industrial molded parts, rollers, ceramic tile molds.
- Crosslinker for heat-activated adhesion, coating or elastomer systems.

Solubility

| Grams of Thanecure® T9 Superfine per 100 cc of solvent | | | |
|--|-------|-------|--------|
| | 23° C | 50° C | 100° C |
| Water | — | — | — |
| Toluene | 0.1 | 2.0 | 18 |
| Chlorobenzene | 0.3 | 3.0 | 36 |
| o-Dichlorobenzene | 0.1 | 2.0 | 7 |