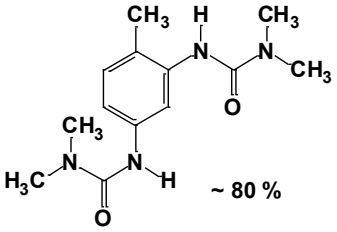
BC UT 50/80 – micronised

Chemical data

Common name:	TDI-Urone
Chemical name:	N,N''-(4-methyl-m-phenylene)bis[N',N'-dimethylurea]
Chemical formula:	$C_{13}H_{20}N_4O_2$
Structural formula:	

CAS No.:	17526-94-2
EC No.:	241-523-6

Parameter	**Specification**	**Typical properties**
Appearance:	White, crystalline powder	White, crystalline powder
Content (HPLC) in %:	≥97	≥98.0
Odour:	Odourless	Odourless
Melting point (DSC) in °C:	≥177	178-184
Volatiles (oven: 4 h, 70 °C) in %:	≤0.2	0.1 ± 0.02
Particle size in µm (laser diffraction)		
d_{90}:	≤10	≤10
d_{50}:	≤7	≤7

Packaging and Storage

Packaging:	60 l fiber drums with 12 kg each or according to our customer requirements
Shelf life:	Minimum 24 months from the date of manufacture when properly stored
Storage and transportation:	It should be stored in the tightly closed original packaging in a dry place.

BC UT 50/80 – technical/non-micronised

Parameter	**Specification**	**Typical properties**
Appearance:	White, crystalline	White, crystalline
Content (HPLC) in %:	≥97	≥98.0
Odour:	Odourless	Odourless
Melting point (DSC) in °C:	≥177	178-184
Volatiles (oven: 4 h, 70 °C) in %:	≤0.2	0.1 ± 0.02

Packaging and Storage

Packaging:	According to customer's requirements (big bags, bags).
Shelf life:	Minimum 24 months from the date of manufacture when properly stored.
Storage and transportation:	In a tightly closed original packaging in a cool and dry place.

Application

Major application areas:

- Latent urone accelerator for:
  - Epoxy resin systems
  - Laminate for electrical circuit boards
  - Powder coatings
  - Structural adhesives
  - Carbon fiber composites

BC UT 50/80 is the most reactive blocked accelerator for the epoxy-dicyandiamide reaction allowing for a long shelf life. **BC UT 50/80** reduces the necessary curing temperature significantly (above 130 °C, short cure cycles are achieved) and does not sacrifice the shelf life of the compound. Following thermal activation, it provides with fast curing and high cross-linking density. **BC UT 50/80** decomposes under heat to form two NCO-(isocyanate-)groups and catalytically active dimethylamine. The dimethylamine accelerates the curing of the epoxy and the isocyanates react with epoxies to form additional linkages via oxazolidinones. **BC UT 50/80** is more active than **BC UD 20** or **BC UF 30**.