Technical Data Sheet - BC UT 50/80



BC Chemicals GmbH, Langenweddinger Str. 22, 39122 Magdeburg, Germany Date of last revision:

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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

<u>Parameter</u>	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 I 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

<u>Parameter</u>	<u>Specification</u>	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

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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**.

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