



## Technical Data Sheet

Model: WCAT-WS2

Product Category: Polyurethane Catalyst (a substitute for DBTDL)

WCAT-WS2 is a new non-butylin polyurethane catalyst recommended for 1-component moisture curing polyurethane system without the environment drawbacks (heavy metals, ortho-benzene etc.). It can pass China and EU environmental regulations.

<b>Typical Properties</b>	Appearance	Clear, light yellow liquid
	Gardner Colour (G.D)	≤2
	Density (g/cm <sup>3</sup> , 25°C)	0.964
	Viscosity (mPa.s, 25°C)	15-40

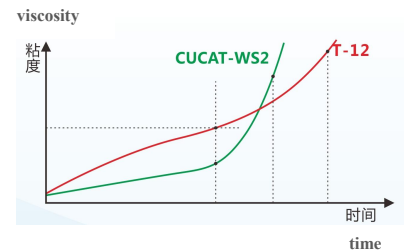
**Solubility** Soluble in normal polyurethane raw materials (polyether polyol, plasticizer)

**Applications** Recommend to use in 1-component moisture curing polyurethane system. It is an alternative to DBTDL used in the production of waterproof coatings, PU sports venues, adhesives and etc.

**Advantage Descriptions** It is an effective catalyst for 1-component moisture curing PU system. Compare to DBTDL, the unique characteristics are following:

- **Extremely long pot life (more than 2 hours), observably reduce bubbles and swelling.**

The time-viscosity variation curve of I-Component PU system as right, separately used WCAT-WS2 and DBTDL, illustrates the nearly straight line at the early curing reaction stage of WCAT-WS2. This means the 1-component PU system used WCAT-WS2 maintain similar viscosity with initial in very long times, which will provide enough pot life and excellent flowing property. Therefore, the mechanical and reaction bubble can fully overflow, and the problems of pinholes and wrinkle on cured-surface can be solved perfectly as well.



Time-Viscosity curve in 1K system

- **Catalytic rate accelerate quickly at later curing reaction stage**  
At the break point of catalytic process, WCAT-WS2 can rapidly catalyze curing reaction and the PU system can attain required performance in short time (approximately 18h, depending on usage levels). It can save 30-50% curing times compare to DBTDL.
- **Long shelf life and non-thickening**  
The shelf life of PU system used WCAT-WS2 is almost double than which used DBTDL. And the viscosity maintains similar with initial during storage period.



- **Effective curing performance in Winter**

WCAT-WS2 demonstrates effectively catalyzing performance in low temperature (5°C) test. It can be applied in wide temperature range compare to DBTDL.

- **Environmental-friendly**

WCAT-WS2 is a non-butyltin and non-heavy metals urethane catalyst. It can pass China and EU environmental regulations.

**Typical Usage Levels**

Levels of 0.05-0.15% as supplied by weight in total formula.

Please add WCAT-WS2 after pre-polymer reaction and test storage stability before use.

**Handling & Storage**

WCAT-WS2 is sensitive to moisture. There, exposure to atmosphere should be avoided. Product should be stored in a cool, dry environment away from sunlight and excessive heat.

**Package**

25kg/200kg in HDPE drum

**Shelf Life**

Unopened shelf life is 12 months from the date of manufacture.

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