



## Technical Data Sheet

### CUCAT-PD

#### Urethane Catalyst (An alternative to organic mercury)

CUCAT-PD is an effective catalyst for the reaction of isocyanates and polyols with hydroxyl groups used in the production of cast elastomers. It is a proprietary mixed organo metallic complex specially formulated to be an alternative to mercury catalysts without the toxicity concerns. It can pass China and EU environmental regulations.

<b>Typical Properties</b>	Appearance	Clear, light red liquid
	Gardner Colour (G.D)	≤4
	Density (g/cm <sup>3</sup> , 25°C)	0.98
	Viscosity (mPa.s, 25°C)	21

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

**Applications** CUCAT-PD is a wide applicable catalyst recommend to use in 2-component polyurethane system, provides gel times and cure properties similar to mercury catalysts. It can be used in diverse PU CASE applications, such as caster, rubber plate, PU sports venues, adhesive & sealant, waterproof coatings. For ambient curing applications, CUCAT-PD can replace organic mercury completely without pinholes and swelling on cured-surface.

**Advantage Descriptions** **CUCAT-PD is formulated for non-bubble requirement in PU CASE application. The unique characteristics are following:**

- **Insensitive to the reaction of isocyanates and water.**  
Non-catalytic property to the reaction of isocyanate and water, directionally catalyzing isocyanates and polyols with hydroxyl groups. This is totally different with the Tin/Amine catalysts. Even in damp weather, CUCAT-PD still performs well to effectively prevent the CO<sub>2</sub> bubbles formed. Therefore, the cured-surface problems, including pinhole, cracking, bulging, peeling, can be solved obviously.
- **Long pot life to provide favorable flowing property.**  
Slow catalytic rate at early reaction stage can keep low viscosity and improve flowing ability, which is important for reducing mechanical bubbles and filling moulding chamber rapidly.
- **Catalytic rate accelerate very quickly at later curing reaction stage**  
CUCAT-PD can catalyze isocyanates-polyols mixture to attain required curing hardness in 10min (even short, depending on usage levels). Furthermore, it is possible for ambient cured system without post vulcanization, which can save 50% energy cost approximately. Therefore, CUCAT-PD is the best alternative to organic mercury with similar catalytic



properties and non-toxicity contents.

<b>Typical Usage Levels</b>	<ul style="list-style-type: none"><li>● Suggest adding in polyol component after vacuum degassing.</li><li>● Levels of 0.1-0.5% as supplied by weight on total polyol volume.</li><li>● Below 0.1% in PU leather thick liquid. Please make sure the best usage levels before production.</li></ul>
<b>Handling &amp; Storage</b>	CUCAT-PD 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.
<b>Package</b>	25kg/200kg in HDPE drum
<b>Shelf Life</b>	12 months from the date of manufacture, when store at ambient conditions in the original container.

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