



## CUCAT-DG01 / CUCAT-DG02

### Polyurethane Catalyst

CUCAT-DG01 and CUCAT-DG02 are both versatile effective catalysts, recommending to TDI/MDI+PPG+MOCA and MDI+PPG+BDO systems for PU CASE applications. They are proprietary mixed organic metallic complex specially formulated to be a substitute to mercury catalysts without the toxicity (heavy metal, PAH, phthalate plasticizers) concerns. They can pass China and EU environmental regulations.

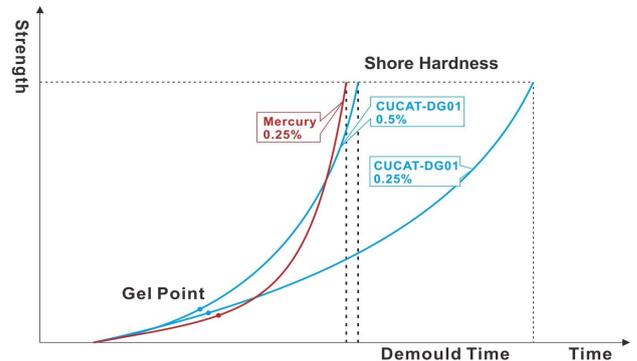
<b>Typical Properties</b>	Appearance	Clear, light yellow liquid
	Colour (Fe-Co)	≤5
	Density (g/cm <sup>3</sup> , 25°C)	1.005
	Viscosity (mPa.s, 25°C)	330±120
	Smell	With special compound smell

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

**Applications** They are general purpose catalysts, which are recommended to be used in 2-component polyurethane systems, especially in TDI/MDI+PPG+MOCA and MDI+PPG+BDO systems, for diverse PU CASE applications, such as PU wheels, cyclones, non-solvent PU leathers, PU flooring coatings, adhesive and sealants.

**Advantage Descriptions** CUCAT-DG01 / CUCAT-DG02 is the newest substitute of organic mercury catalyst, developed for PU non-foam applications. It has excellent catalytic selectivity of the reaction between isocyanates and hydroxyl/amino group, without catalyzing to the reaction between isocyanates and moisture, performs very similar with organic mercury of initial viscosity, gel point and post-cure time. The unique characteristics are following:

- ▲ **Excellent flowability.** CUCAT-DG01 would not improve initial viscosity of mixtures that make the mixtures can flow into mold freely and quickly.
- ▲ **Stability of pot life.** Increase dosage would not shorten the pot life obviously, the pot life keep similar even if the dosage is double.
- ▲ **Fast curing.** The strength and demoulding time is very similar with organic mercury when the dosage of CUCAT-DG01 is twice as organic mercury.
- ▲ **Out-standing catalytic selectivity.** CUCAT-DG01 can improve the transparency of PU products significantly due to almost no catalytic activity for the reaction between isocyanates and moisture.



The Time-Strength curve (TDI+ PPG+MOCA) as above demonstrates that CUCAT-DG01 performs very similar as organic mercury on gel point, demoulding time and demoulding strength when the dosage of CUCAT-DG01 is twice as organic mercury. Compared with CUCAT-DG01, CUCAT-DG02 shortens the post curing time by about 1 / 4 without changing the flow time.

- Typical Usage Levels**
- ▲ Suggest adding in polyol component after vacuum degassing.
  - ▲ To add CUCAT-DG01/DG02, the polyol component temperature should be below 80°C at least.
  - ▲ Levels of 0.05-0.5% as supplied by weight on total polyol volume.
  - ▲ We don't suggest adding in isocyanate component. To avoid gel, please do test before adding in isocyanate component to make sure the storage stability.

**Handling & Storage** CUCAT-DG01/DG02 is sensitive to moisture. Therefore, 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** The unopened shelf life is 24 months from the date of manufacture. After shelf life, please do test to make sure the catalytic properties before use.

All recommendation and technical information (whether verbal, written or by way of product evaluations), including any suggested formulations contained herein is provided for information purpose only and does not constitute a legal contract as well as suitable for relating to the third party rights. The conditions of your use and application of our products, technical assistance and information are beyond our control. Therefore, no guaranty or warranty for your evaluation is made. Consequently the user assumes all risks in connection with the use and handling of this product based on our technical information and recommendations, final determination of suitability of this product is the sole responsibility of the user. (2018 version)