



Technical Data Sheet

Product Name: Eco-friendly Catalyst CUCAT-GW01 for high temperature prepolymer polyurethane elastomer

Typical Properties:

Appearance	Yellowish liquid
Colour (Fe-Co)	≤4
Density (g/cm ³ , 25°C)	0.9977
Viscosity (mPa.s, 25°C)	10±200
Odor	With Slight Odor

Solubility: Soluble in common polyurethane raw materials, such as polyether polyols, plasticizers, solvents, etc.

Applications:

It is widely used in the production of cast polyurethane elastomer, especially the high-temperature process of traditional prepolymer + MOCA (or DMTDA and other amines), to produce casters, rubber coated miscellaneous parts, rubber rollers, PU plates and rods, PU special-shaped parts, screens and so on. It can achieve low energy consumption and high efficiency (low curing temperature, shorten molding and demoulding time), so as to greatly reduce the comprehensive production cost and improve the quality stability of products.

Features & Advantage:

The traditional cast polyurethane elastomer mostly adopts the production process of prepolymer + MOCA (or DMTDA and other amines) as chain extender and curing agent, which is adopted by most small and medium-sized enterprises in China. It has the advantages of simple process, low technical threshold, flexible production, but it has the obvious disadvantages of high process temperature, such as long time-consuming, high energy consumption and low efficiency. CUCAT-GW01 is an efficient and eco-friendly catalyst to promote the reaction between curing agent and isocyanate. Adding an appropriate amount of CUCAT-GW01 can make up for the above shortcomings and has the following unique properties:

- **Low energy consumption and high efficiency, greatly reduce costs and improve production efficiency.**
Reduce curing temperature and reduce energy consumption cost: by adding GW01, the curing temperature can be reduced from 110-120 °C to 85-100 °C, but the performance will not be reduced.
Shorten vulcanization time: after adding GW01, on the premise of reducing curing temperature, not only the demoulding time is shortened, but also the post curing time is reduced from 12h to 4-6h. Some products do not even need post curing, which greatly improves the production efficiency.
- **Improve the stability of gelling quality and reduce the rate of poor bonding.**
Adding an appropriate amount of GW01 is beneficial to reduce the influence of temperature difference in the gelling process, reduce the shrinkage stress, improve the bonding performance and reduce the rate of poor bonding.
- **Reduce the leakage of material and glue in the mold gap during the glue forming process, and reduce the trouble of subsequent glue scraping treatment. This feature is very suitable for the production of PU wheel.**
Because after adding GW01, the viscosity of PU material increases rapidly after being put into the mold, which effectively reduces the phenomenon of glue leakage.
- **CUCAT-GW01 is allowed to be added into the prepolymer in advance without affecting the storage stability, which is special because most catalysts are unstable when added to the prepolymer.**

User's Guide:

- When in use, it is added into the prepolymer component. The prepolymer manufacturer can add it and stir it evenly before discharging; The prepolymer user can add it to the prepolymer before production and stir it evenly.
- The dosage is related to the formula and process factors, generally 0.05 ~ 0.3% of the weight of prepolymer.
- Because the end products using this catalyst have different uses and environmental protection requirements, it is recommended that users should conduct self-evaluation according to the actual detection of relevant standards.

Handling & Storage:

Product should be stored in a cool, dry environment away from sunlight, excessive heat and rain. After normal use, the tank mouth must be closed immediately to avoid open placement.

Package: 25kg/200kg in HDPE drum

Shelf Life: The unopened shelf life is 18 months from the date of manufacture. After expiration, if the test is qualified, it can still be used normally.