

## Application of Catalyst and Additive in Adhesive & Sealant

### 1. Two components adhesive, sealant

Recommended Products : CUCAT-HAA、CUCAT-HAB、AUCAT-1001E、CUCAT-T30

- ★ Solve the bubble problem: target and catalyze the reaction between isocyanate and hydroxyl, which is not sensitive to trace moisture in the environment and materials, so as to avoid or reduce the hollowing and poor adhesion caused by
- ★ Environmental protection: it does not contain organic tin, lead and mercury, which meets the environmental protection requirements of export products.
- ★ HAA is less sensitive to trace moisture than HAB, but post curing is less than HAB.
- ★ T-30 is a post curing catalyst that does not affect the pot life. If the strength of the gel need to be rapidly increased, it is recommended to collocate with T30.
- ★ 1001E not only has no foaming characteristics, but also has the characteristics of hydrolysis resistance without failure. The catalytic activity of the composite will not be reduced after long-term storage.



### 2. One Component Adhesive, Sealant, PUR

Recommended Products: WCAT-WS2/WS8/WP01/WH03

- 1) Ws2 / WS8 is recommended for aromatic isocyanate moisture curing system and has the following characteristics:
  - ★ Less bubbles and stronger bonding / sealing.
  - ★ The bonding strength increases rapidly at low temperature in winter. It overcomes the disadvantage of too slow catalysis of T-12 at low temperature in winter, and the curing time is more than twice shorter than that of T-12, which is obvious in low activity TDI system.
  - ★ Stable storage, low viscosity during synthesis and storage. The viscosity of end NCO glue synthesized by single component formula is lower than that of T-12, and the viscosity is more stable during storage.
  - ★ Eco-friendly. It does not contain butyl tin which is environmentally restricted.
  - ★ Ws8 has higher catalytic activity than WS2 and is suitable for TDI system. WS8 is recommended for MDI system.
- 2) WP01 is recommended for aliphatic isocyanate moisture curing system. Compared with T12, the material surface and internal curing time can be increased by more than 2 times, and advantages at the low temperature in winter is more significant.
- 3) WCAT-WH03 is recommended for PUR, with good storage stability and faster curing than DMDEE.



### 3. Shoe Adhesive

Recommended Products: AUCAT-1301, Organic Bismuth BCAT series, Organic Zinc ZCAT series

AUCAT-1301 is recommended for synthetic adhesive for shoes, with the following characteristics:

- ★ It does not contain tin and is environmentally friendly, ensuring that it meets the stringent requirements of environmental protection regulations at home and abroad.
- ★ The reaction viscosity of the resin increases rapidly, the synthesis time is shortened, and the process stability is the same as that of organic tin. Solve the problems of low catalytic activity of organic bismuth, slow increase in viscosity or even failure in viscosity (slow increase in molecular mass or even failure to produce resin of high molecular mass). When synthesizing adhesive resin for shoes, the Rod-climbing time is accurate and stable, and the production efficiency is the same as that of
- ★ The catalytic activity is close to that of organic tin, more than 20 times higher than that of organic bismuth. The dosage is slightly higher than that of organic tin, but only one tenth of that of organic bismuth. In fact, even if the dosage of organic bismuth is increased, the activity is still significantly insufficient.
- ★ It does not affect the transparency of polyester resin.



### 4. Two-components adhesive for rock wool insulation board, door industry and wood industry.

Recommended Products : FOCAT-8002、NCAT-YC01

- ★ 8002 ensures that the two-components adhesive has a long milky period after mixing, and ensures a long-time viscous flow state. The strength increases rapidly after pressing plates. It is very suitable for the bonding process of rock wool insulation board and door industry.
- ★ Yc01 is developed to solve the problem of short flow time of two-components adhesive in summer, which can prolong the milk white flow time of two-components adhesive at high temperature and avoid the disadvantage of reducing the bonding strength due to too fast curing.

## Product Selection Guide for applications in adhesive and sealant

Product Name	Model	Recommended Application Field							Property
		2K PU Adhesive	Moisture Curing Adhesive	Shoe Adhesive	Film Covering Adhesive	PUR	Cold Patch Adhesive	Two Component Adhesive	
Catalyst	CUCAT-DG02	★					★		Thermal activity, fast curing, no foaming
	CUCAT-HAA	★★					★★		extremely insensitive to moisture and does not foam
	CUCAT-PDAA	★★					★★		Insensitive to moisture, fast curing
	CUCAT-HAB	★★							No foaming, fast post curing
	CUCAT-HN6	★							Eco-friendly tin catalyst, high activity and fast curing
	CUCAT-NX100							★	Delayed catalyst, rapid curing during thermal forming.
	AUCAT-1001E	★★							No foaming, hydrolysis resistance and good stability
	AUCAT-202	★★							Rear section catalysis, fast forming and stable
	AUCAT-RM301 AUCAT-RM60	★★						★	Thermal sensitive catalyst, thermal forming, rapid curing
	AUCAT-1301			★★					High activity, eco-friendly, substitute for tin
	WCAT-WS2		★★			☆			Good storage stability and no deactivation at low temperature
	WCAT-WS8		★★			☆			Less dosage, good stability and no deactivation at low temperature
	WCAT-WP01		★★			☆			High activity, suitable for aliphatic moisture curing
	WCAT-WH03		★				★★		Tin free, high activity and stable storage
	AUCAT-T62	★				☆			Long pot life, fast post curing, stability and no failure
	ZCAT-T50	★				☆			Long pot life, good leveling and fast post curing
	FOCAT-8002							★	Gentle and mild curing, accelerate post forming.
	NCAT-YC01							★	Polymerization inhibitor, to reduce reaction activity
	BCAT series Organic Bismuth	☆			☆			☆	General purpose organic bismuth catalyst
	ZCAT series Organic Zinc	☆			☆	★★		☆	General purpose organic zinc catalyst
Anti-settle Dispersing Agent	YRFC-03	★	★						Anti sagging, anti powder settlement and hardening at barrel bottom, easy dispersion
Anti-settle viscosity reducer	YRFC-06A	★	★						High efficiency pigments and fillers disperse viscosity reducer, good leveling, anti powder settlement and hardening at the bottom of the barrel
Defoaming Agent	YRXP-02	★	★		★	★	★		Non silicon defoamer. Not affect interlayer adhesion
	YRXP-06	☆	☆		☆		☆		Silicon efficient defoamer, excellent foam inhibition and breaking effect
Water Removing Agent	CUWR-WB20	☆	☆				☆		Eliminate trace moisture in raw materials and solve the problem of bubbles caused by the reaction of water and isocyanate to generate CO2
	CUWR-WB50T	☆	☆						

Meaning of Logo: ★★ — strongly recommended    ★ — recommended    ☆ — usable

The above are only some of the products in application

This guide is only a rough directional guidance. The actual formula process is complex and diverse.

The accurate suitability needs to be confirmed by test or communicated with Yourun engineer.