

Application of Catalyst in Polyurethane Foam

Organic tin tends to be banned in export products containing PU foam, such as toys, clothing, shoes, automobiles, furniture and so on. Organic bismuth catalyst is environmentally friendly, but its catalytic activity is low, and it will hydrolyze in a short time when premixed with aqueous material, resulting in reduced activity or even failure. Organic tin also has the disadvantage of hydrolysis failure. Yourun FOCAT/AUCAT series catalysts have the following common advantages in foaming industry:

- Environmental protection:** it does not contain tin to ensure that it meets the stringent requirements of environmental protection regulations at home and abroad; Comply with harsh international environmental protection regulations such as REACH, ROHS, STANDARD 100 by OEKO-TEX,
- Hydrolysis stability:** it can be premixed and added into the aqueous formula system in advance, and the catalytic activity is stable without attenuation after long-term storage; It solves the technical problem of hydrolysis failure of ordinary organic bismuth / tin and other metal catalysts in aqueous formula, and the formula and process are simpler, more stable and more flexible.etc.

And also have other advantages in specified application as following:

- Soft foam includes high or slow rebound foam, toy cotton, clothing cotton, etc.**
It is eco-friendly and ideal substitutes for organic tin T-9 or T-12.

Recommended Products : AUCAT-1001E, AUCAT-101, FOCAT-8004M

- High activity, strong promotion of gel reaction, anti collapse of bubbles, size stability.** As a strong gel catalyst, it's high activity and target characteristic ensure effective solidification after foaming.etc.

- Rigid foam and integral skin foam includes foamed tire, bicycle / motorcycle seat, automobile steering wheel, anti-collision board, side guard board, instrument console, snowboard, imitation wood furniture, etc**

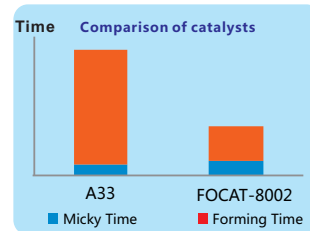
Recommended Products : FOCAT-8002, FOCAT-8003M

- Extend the milky white period and greatly shorten the demoulding time.** It can collocate with tertiary amine catalyst to prolong the milk white flow period and greatly shorten the molding and demoulding time.
- The skin is bright and flawless:** it solves the defects of self skinned molded products, such as pitting, bulging, peeling, matte and so on. The catalytic characteristic of 8003M makes the outer polyurethane mixture close to the mold ideally match the internal reaction rate, but the common metal catalyst does not have this characteristic
- 8003M is suitable for polyether system, 8002 is general-purposed but more suitable for polyester system.

- Electronic microporous elastic foam, carpet bottom back**

Recommended Products : AUCAT-RM301, AUCAT-202, CUCAT-RM60

- Rm301 is a heat sensitive and highly active catalyst** with low catalytic activity at room temperature. It is recommended for electronic cotton and other products. The initial viscosity of mixing material is low and the fluidity is very good.
- Rm301 is not sensitive to water,** does not catalyze the reaction between isocyanate and water, and does not affect the surface flatness, permanent deformation and other properties of electronic cotton.
- 202 is of mild catalytic activity,** which promotes gel formation without affecting the flow period. It has excellent synergy when collocates with RM301.



Attached Table: Product Selection Guide for applications in adhesive and sealant

Product Name	Model	Recommended Application Field							Property
		Soft Foam	Rigid Foam	Integral Skin Foam	Imitation Wood	Toy Cotton	Clothing Cotton	Electronic Foam	
Catalyst	AUCAT-1001E	★★	☆	☆	☆	★★	★★		Strong gel function, substitute for tin; The combination with amine can prolong the milky time; Balance gel and foaming, anti shrinkage and bubble collapse.
	AUCAT-202	☆	☆	☆	☆	☆	☆	★★	Hydrolysis resistance, mild activity, collocates with other catalyst with good coordination, and speed up post molding
	AUCAT-RM301	☆	☆	☆	☆	☆	☆	★★	High thermal sensitivity, high activity and long flow period
	CUCAT-RM60	☆	☆	☆	☆	☆	☆	★★	Delay catalyst with thermal sensitivity. speed up post molding.
	FOCAT-8002	★	★	★	★	★	★		Long milky white period and quick forming
	FOCAT-8003M		★	★★	★★				Strong gel function, substitute for tin; The combination with amine can prolong the milky time; Improve the brightness of integral skin foam.
	FOCAT-8004M	★	☆			★	★		No foaming, hydrolysis resistance and good stability

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

The above are only some of the products in application