



## Technical Data Sheet

**Product Name:** Low TVOC Eco-friendly Catalyst for Silicon PU

### Characteristic Description:

Model	Appearance	Colour (Fe-Co)	Density g/cm <sup>3</sup> (25°C)	Viscosity mPa.s (25°C)	Property
WCAT-WS11	Transparent to amber liquid	≤ 10	1.017	60±30	Mild catalysis, suitable for summer construction, reducing pinholes
WCAT-WS11A	Transparent to brown liquid	≤ 13	1.025	10-50	High activity at low temperature, fast post curing, suitable for winter construction

### Unique Performance:

WCAT-WS11/WS11A is a highly efficient catalyst developed **specifically for the strict requirements of TVOC** in the national standard GB36246-2018. It is used for single component moisture curing PU coatings that rely on the principle of crosslinking and curing reaction between moisture in the ambient air and isocyanate groups. It has the following characteristics:

- **The two main characteristics of high boiling point and extremely low emission fully ensure that the product meets the strict TVOC standard requirements.** The boiling point is much higher than the 250 °C defined by VOC, exceeding the upper limit of 287 °C specified by the synthetic material standard TVOC for sports venues. It hardly increases the TVOC of synthetic material, solving the current problem of ordinary catalysts exceeding the TVOC standard.
- **Keeping low viscosity state and a long flowable time, effectively reducing bubbles and bulging.** The viscosity of materials using WS11 and WS11A is lower than that using organic tin T12, and the construction leveling property is good, which is conducive to full overflowing of stirring bubbles and early reaction bubbles, greatly reducing surface pinholes, bulges, and wrinkles.
- **WS11 catalyzes mildly, suitable for high-temperature construction in summer, reducing bubbles and pinholes.**
- **WS11A enhances catalytic activity under low temperature and low humidity conditions, solving the problem of slow curing at low-temperature in winter.** It overcomes the disadvantage of T-12 catalyst curing too slowly at low temperatures in winter. WS11A still maintains good catalytic effect in low temperature (5 °C) testing, reducing the curing time by about 50% compared to T-12.
- **Good storage stability.** The storage period is even longer under sealed and isolated moisture storage conditions.

### Applications:

It is widely used in moisture cured single component polyurethane materials with strict control requirements for VOC and TVOC, such as silicone PU, waterproof coatings, sealants, etc.

### User's Guide:

- It is recommended to be added at the end of prepolymerization reaction of isocyanate with polyether polyol. It is not recommended to be premixed with polyether polyol in advance to avoid gel accident caused by violent reaction temperature rise. The recommended dosage is 0.02-0.15%.
- WS11 and WS11A both have a certain degree of water absorption. Do not expose them to the air to prevent water absorption. After normal use, it is important to immediately close the tank opening.

### Handling & Storage:

Product should be stored in a dry and cool warehouse, avoiding sunlight and rain.

**Package:** 25kg/200kg in HDPE drum

**Shelf Life:** The unopened shelf life is 12 months from the date of manufacture. The gradual deepening of color during storage is a normal phenomenon and does not affect the catalytic effect. If the catalytic activity does not decay after expiration, it can still be used as a qualified product.

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