



## Technical Data Sheet

**Product Name:** Organic Bismuth and Zinc Composite Catalyst BX-EM23

### Typical Properties:

Appearance	Yellowish transparent liquid
Colour (Fe-Co)	≤4
Density (g/cm <sup>3</sup> , 25°C)	1.079-1.119
Viscosity (mPa.s, 25°C)	1830±500
Metal Content	Bismuth 8±0.5%, Zinc 8±0.5%
Odor	With special compound odor

**Solubility:** Soluble in normal polyurethane raw materials.

### Eco-friendly Characteristic:

It does not contain restricted heavy metals, polycyclic aromatic hydrocarbons and o-benzene substances, and complies with strict environmental protection regulations at home and abroad. It is an environmental protection substitute for traditional organotin, mercury, lead and other catalysts.

### Applications:

It is generally used in polyurethane industry and widely used in CASE (Coating, Adhesive, Sealant and Elastomer) field; The catalytic activity is equivalent to that of BiCAT 8.

### Features & Advantage:

BX-EM23 is a composite catalyst of organic bismuth and zinc through fine control synthesis. It has the typical characteristics of eco-friendly bismuth and zinc catalyst:

- ❖ Safety and environmental protection. It can replace organic lead, mercury and tin in some applications;
- ❖ Compared with T9, it has better hydrolysis resistance stability, but it will still hydrolysis and fail in aqueous formula. Please choose AUCAT series for hydrolysis resistance catalyst.
- ❖ Promote NCO / OH reaction. In oil-based or water-based polyurethane, it can reduce the side reaction between water and NCO group and reduce the generation of CO<sub>2</sub> to a certain extent, but the selectivity of reducing the reaction of isocyanate with water is not as good as CUCAT-HA / HAA / PD;
- ❖ Good catalytic coordination. Organic bismuth is a highly active catalyst to promote NCO / OH reaction. Organic zinc can promote the cross-linking reaction, accelerate post curing and form faster;
- ❖ It has good compatibility and can be used alone or in combination with other organometallic compounds;
- ❖ It does not contain solvents and does not belong to VOC substances.

### User's Guide:

- If it is used for polyurethane two-component composite, it is recommended to be added into polyol (P material) component. It is recommended to add it after dehydration and stir evenly;
- If it is used for coating, it is recommended to add it before on-site construction, which will have better effect than premixing.
- The general dosage is 0.02 ~ 0.8% of the weight of PU.
- It is not recommended to be added into isocyanate component (material I). If it must be added, the applicability and storage stability test must be carried out first.
- Be sure to seal and store immediately after use.

### Handling & Storage:

Product should be stored in a cool, dry environment away from sunlight, excessive heat and rain.

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

**Shelf Life:** The unopened shelf life is 24 months from the date of manufacture.

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