

## Technical Information

## KOSMOS® T 12 N

**Description**

KOSMOS® T 12 N (dibutyltindilaurate) is a high-boiling liquid organotin compound used as an effective catalyst in the production of polyurethane foams, coatings, adhesives and sealants.

Since pure dibutyltindilaurate is a solid at room temperature, KOSMOS® T 12 N has been specifically formulated to remain liquid at temperatures above 10 °C to permit easier handling in most applications.

The residual-free acid level is low and the product is non-corrosive to iron in the absence of moisture.

**Key performance benefits**

- Promotes rapid gel and tack-free times
- Improved mechanical properties in moulded and slabstock foams

**Typical properties\***

Appearance	Yellowish liquid
Viscosity at 20 °C	30 mPa · s
Density at 20 °C	1.043 g/cm <sup>3</sup>
Flash point (PMCC)	> 180 °C
Refractive index	1.4680 - 1.4740
Total tin content	18.0 - 19.0 %
Color (Gardner)	Max. 4
Water solubility	Sparingly soluble

\* For actual ranges, please refer to the Certificate of Analysis (CoA) / Sales Specification.

**Application**

KOSMOS® T 12 N finds wide use in the manufacture of rigid polyurethane foams. In demanding applications where amine catalysis alone is inadequate, the extra activity obtained by the synergistic combination of organometallics like KOSMOS® T 12 N with an amine catalyst permits the required rapid catalysis.

Examples of these applications include high-density structural foam, spray-up wall insulation and rigid boardstock run at high line speeds. Even when used at levels as low as 0.1 pph polyol, KOSMOS® T 12 N is especially effective in promoting rapid gel and tack-free times.

Tetravalent diorganotins like KOSMOS® T 12 N are known throughout the industry as promoters of the reaction of isocyanates with polyols to form polyurethanes, and of the secondary cross-linking reactions to form allophanate and biuret linkages. Because of this selectivity for polymerization, KOSMOS® T 12 N is often a benchmark in the catalysis of polyurethane systems including two-component adhesives and moisture-cure coatings, where the oxidative stability of tetravalent tins permits master batching of components. Use-life and retention of catalytic activity of such a master batch are dependent upon the presence of amines, moisture and other additives as well as on the storage temperatures.

### Storage recommendations

- Shelf life: minimum 12 months. For exact date of expiration, please consider CoA.
- Storage conditions: dry and cool place in factory-packed containers.
- Optimum storage temperature: 10 to 30 °C.

### Safety instructions

Please consult the Safety Data Sheet for summary of product hazards, personal protective measures, and emergency release procedures.

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