

Technical Information

DABCO® T-12 Catalyst

Description

DABCO® T-12 catalyst (dibutyltin dilaurate, DBTDL) promotes the urethane (polyol – isocyanate) reaction for the production of flexible and rigid polyurethane foams, coatings, adhesives and sealants.

Special properties/Highlights

- Promotes rapid gelation and tack-free times
- Improves mechanical properties in molded and slabstock foams

Application

DABCO® T-12 catalyst finds greatest 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 DABCO® T-12 catalyst with an amine catalyst permits the required rapid catalysis. Examples 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 phr based on polyol, DABCO® T-12 catalyst is especially effective in promoting rapid gel and tack-free times. Tetravalent diorganotin compounds like DABCO® T-12 catalyst are known throughout the industry as promoters of the reaction of isocyanates with polyols to form polyurethanes, and of the secondary crosslinking reactions to form allophanate and biuret linkages.

Because of this selectivity for polymerization, DABCO® T-12 catalyst 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 masterbatching of components.

Use-life and retention of catalytic activity of such a masterbatch are dependent upon the presence of amines, moisture and other additives as well as on the storage temperatures. Organotin carboxylates will hydrolyze like any ester, so applications demanding specific pot lives should be laboratory screened first.

Typical physical properties

Appearance	Light yellow liquid
Flash point, °C (PMCC)	>204
Viscosity at 25 °C, (g/cm ³)	125
Specific gravity @ 21 °C (g/cm ³)	1.03
Calculated OH number, mg KOH/g	0
Water solubility	Insoluble

Recommended storage conditions

DABCO® T-12 catalyst has a shelf life of 24 months from the date of manufacture and under the condition, that it is stored in factory-packed containers and protected against extreme weather conditions, particularly against heat and moisture. The optimum storage temperature of DABCO® T-12 catalyst is in between 10°C and 30°C. Lower and higher storage temperatures are not preferable and should be avoided.

Information concerning

- classification and labelling according to regulations for transport of chemicals
- protective measures for storage and handling
- measures in case of accidents and fires
- toxicological and ecotoxicological effects

is given in our safety data sheets.

Disclaimer

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