MANTA

Technical Data Sheet

Version: 1.0

Manta CAT-DBTDL

Organotin Catalyst (Dibutyltin Dilaurate / DBTDL)

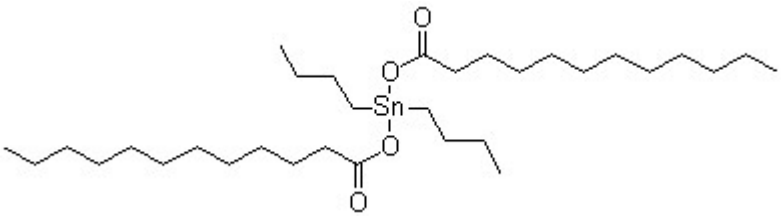
Description

Manta CAT-DBTDL is Dibutyltin Dilaurate (DBTDL) organotin catalyst. Recognized as the industry standard for polyurethane (PU) and silicone chemistry, it offers a well-balanced catalytic profile for both the isocyanate-hydroxyl reaction and the silanol condensation process.

Manta CAT-DBTDL is highly valued for its excellent solubility in polyols and solvents, providing consistent curing rates and superior mechanical properties in the final polymer. Beyond catalysis, it also serves as an efficient heat stabilizer for specialized PVC applications.

It is equivalent to industry benchmarks such as FASCAT 4202, TIB KAT 218, and Metasol T-12.

Typical Physical Properties

Manta Code:	CAT-DBTDL
Chemical Name	Dibutyltin dilaurate
CAS NO.	77-58-7
EC NO.	201-039-8
Formula	C32H64O4Sn
Molecular Weight:	631.56
Appearance	Slightly yellow transparent liquid
Density(ρ25°C, g/cm³）	1.040-1.080
Tin Content (%)	18.0%-19.2%
Molecular Structure	

Features

- Standard-Setting Performance: Provides reliable and predictable gelation and curing kinetics in PU systems.
- Broad Compatibility: Easily miscible with polyols, polyethers, and a wide range of organic solvents.
- Dual Functionality: Acts as both a catalyst for polymerization and a thermal stabilizer for PVC compounds.
- High Efficiency: Delivers powerful catalytic effects even at extremely low dosage levels (typically 0.01% – 0.5%).

Applications

1. Polyurethane (PU) Systems

Coatings & Paints: Widely used in 2K polyurethane coatings (automotive OEM, refinish, and industrial wood coatings) to accelerate the reaction between isocyanates and polyols.

Elastomers & Sealants: Essential for the production of PU elastomers, CASE (Coatings, Adhesives, Sealants, Elastomers) applications, and sports flooring (plastic runways).

Flexible & Rigid Foams: Promotes efficient gelling in specialty foam formulations.

2. RTV Silicone Rubbers

Acts as a crosslinking catalyst for room-temperature vulcanizing (RTV) silicone systems, facilitating the condensation of silanol-terminated polymers with crosslinkers.

3. PVC Heat Stabilization

Used as a high-efficiency heat stabilizer in the production of soft, transparent PVC compounds. It provides excellent lubrication during processing and ensures long-term thermal stability and clarity.

4. Silane-Modified Polymers (SMP)

Functions as a secondary or primary catalyst in moisture-curing hybrid adhesives and sealants to ensure a thorough deep-section cure.

5. Esterification Reactions

Utilized as a catalyst in the synthesis of polyesters and plasticizers, where it helps reduce reaction times and improves yield quality.

Packaging

In 25kg pail, 200kg drum.

Safety and Storage

Keep away from heat and open flame. When stored at or below 25°C in the original unopened containers, this product has a usable life of 12 months from the date of production (200L drum).

Contact Information

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