

POLYURETHANE CATALYSTS

Dura supplies a range of organo metallic catalysts including:

Zinc

Potassium

Bismuth

These catalysts are used in accelerating the isocyanate / polyol reaction and the selection of one or more of the above catalysts depends on the formulation.

Dura also offers an organo tin based product **DURASTAB LT2** finds application as a catalyst for short polyurethane foams. A catalyst combination of DURASTAB LT2 and DURASTAB LT3 Stannous Octoate is sometimes used together with tertiary amines to avoid oxidative degradation.

TECHNICAL BRIEF

DURASTAB LT-3

DURASTAB LT-3 is a stannous salt of ethylhexanoic acid, also widely known as stannous octate. Stannous octate and tertiary amines, which are applied simultaneously, are essential catalysts for the manufacture of polyurethane foams.

Recommended Storage conditions

The storage stability of DURASTAB LT-3 is at least 12 months, provided it is kept in the original sealed containers and protected against heat and humidity.

Storage during cold weather should not create any problems as DURASTAB LT-3 has a solidification point below -20°C.

Application

DURASTAB LT-3 acts as an efficient catalyst for the gelling reaction during the generation of polyester polyurethane foams. Due to an interaction with the simultaneously applied amines, it also influences the blowing reaction to a certain extent.

For this reason, the optimal use level depends on the formulation details, like reactivity of polyol, type of amine, type and amount of blowing agent and desired rise time.

Indications of catalysis out of balance are tight foam with bad porosity if the applied amount of stannous octate is on the high side, and lots of tiny internal tissues combined with superior air flow, but a completely inferior tear strength if the chosen level is too low.

Based on 100 parts of polyol 0.17 - 0.40 parts per weight of DURASTAB LT-3 are commonly used levels. Special formulations for low-density methylene chloride blown foams can require up to 0.70 parts.

There are 2 ways to feed the DURASTAB LT-3, either directly or to increase the accuracy, premixed with some polyol, e.g., in a ratio of:10. Those premixes should be used up quickly, preferably with the same day.