

# BIO-BASED CATALYSTS

## A CATALYST LINE BUILT ON SUSTAINABILITY

The environmental, human health, and the economic advantages realized through green chemistry are serving as strong incentives for industry to adopt greener technologies. REAXIS® is poised to deliver sustainably sourced catalysts that are completely derived from plant-based and recycled materials. Introducing, REAXIS® C1004EXP, C1007EXP, C1008EXP and C1009EXP, a family of renewable catalysts for urethane, ester and silicone chemistries.

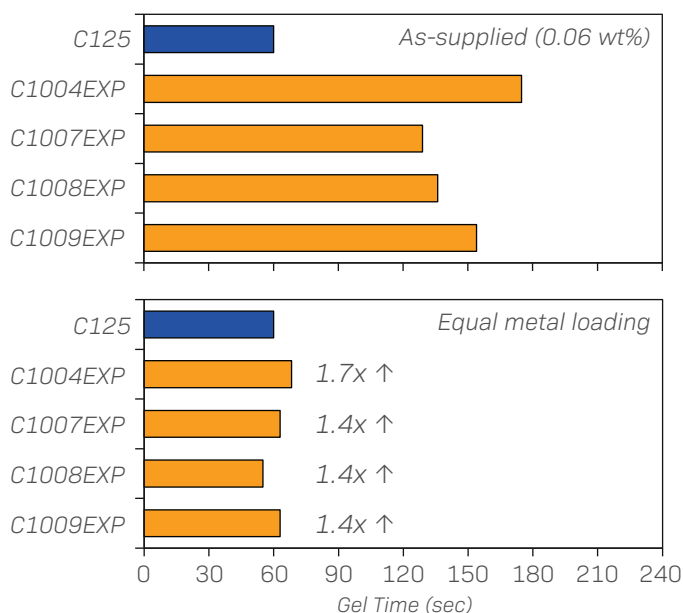
The Chemistry & Toxicity of Inorganic Tin: A Mini Review



## FORMULATE FOR THE FUTURE

Inorganic tin-based catalysts, e.g. stannous octoate (REAXIS® C129) & stannous neodecanoate (REAXIS® C125), are commonly employed as critical performance additives in the manufacturing processes of numerous urethane, ester and silicone based products. Continually evolving regulatory and classification changes surrounding these catalysts present a significant challenge to formulators: find an alternative catalyst with similar performance and minimal hazards all while conserving the bottom line. New bio-based inorganic tin catalysts developed at REAXIS® are manufactured to maximize sustainability while harnessing the reactivity and low toxicity of inorganic tin. The performance of these low-viscosity alternatives can be fine tuned to easily replace industry standard catalysts as shown in Figure 1. This is the future of inorganic tin catalysis.

**FIGURE 1.** Catalytic performance in a 2-part urethane elastomer formulation



REAXIS® Product	Metal Content (%)	Bio-Derived Content (%)	Viscosity / 20 °C (cPs)	Recycled Tin Source
C125	22 %	0 %	< 5,000	○
C1004EXP	15 %	85 %	< 500	●
C1007EXP	16 %	84 %	< 400	●
C1008EXP	18 %	82 %	< 600	●
C1009EXP	17 %	83 %	< 500	●

○ Option not available    ● Manufactured upon request

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