

Catalysts for 1K & 2K Polyurethane Systems

Tin-free metal carboxylates for urethanes



Tin-free catalysts for polyurethane systems provide:

- Reduced cure times
 - Excellent mechanical properties
 - Prevention of labeling required for popular dibutyltin dilaurate (DBTDL) catalysts
- In the European Union, appropriate labeling is required in products with more than 0.1% DBTDL (which is classified as a Mutagen and Reproductive toxicant)

Product Name	Chemistry	Metal Content (%)	Use (%) [*]	Reactivity	Description
Borchi® Kat 315 EU	Bi	16	0.01-0.03	High	<ul style="list-style-type: none"> • Solvent-free catalyst based on bismuth neodecanoate; specially designed for one- and two-component polyurethane systems and RTV silicones • Accelerates the chemical reaction between the polyol and isocyanate component of polyurethane foam systems
Borchi® Kat 21	Bi	21	0.01-0.03	High	<ul style="list-style-type: none"> • Highly reactive solvent-free catalyst based on bismuth neodecanoate for solventborne one- and two-component polyurethane clearcoats and pigmented coating systems
Borchi® Kat 24	Bi	24	0.01-0.03	High	<ul style="list-style-type: none"> • Solvent-free catalyst based on bismuth 2-ethylhexanoate; specially designed for one- and two-component polyurethane systems • Accelerates the chemical reaction between the alcohol and isocyanate component of polyurethane coatings systems, thus allowing optimum control of the drying properties
Borchers® Deca Copper 8	Cu	8	0.001-0.010	Medium	<ul style="list-style-type: none"> • Copper neodecanoate dissolved in white spirit • Provides longer processing time and lowers the exothermic peak of unsaturated polyester formulations
Borchers® Deca Potassium 12	K	12	0.2-1.0	Low	<ul style="list-style-type: none"> • Primary neodecanoate catalyst for rigid urethane foams, accelerator additive for unsaturated polyesters and pot life stabilizer for two-component polyurethane systems • Diluted in diethylene glycol
15% Potassium Hex-Cem® EU	K	15	0.2-1.0	Low	<ul style="list-style-type: none"> • Specially designed for unsaturated polyesters and pot life stabilizers for two-component polyurethane systems • Potassium 2-ethylhexanoate dissolved in diethylene diglycol which combined with cobalt supports the accelerating effect and discoloration of unsaturated polyesters dissolved in styrene, ultimately requiring less cobalt in the system
Borchi® Kat 15	Zn	15	0.01-0.04	Low	<ul style="list-style-type: none"> • Based on pure zinc neodecanoate with moderate reactivity for solventborne one- and two-component polyurethane coatings and other chemical systems • Diluted in dearomatized white spirit
Borchi® Kat 0761	Zn	15	0.01-0.04	Low	<ul style="list-style-type: none"> • Based on pure zinc neodecanoate with moderate reactivity for solventborne one- and two-component polyurethane coatings and other chemical systems • Diluted in fatty ester
Borchi® Kat 19	Zn	19	0.01-0.03	Low	<ul style="list-style-type: none"> • Solvent-free catalyst based on zinc neodecanoate for solventborne one- and two-component polyurethane clearcoats and pigmented coating systems
Borchi® Kat 22	Zn	22	0.01-0.03	Low	<ul style="list-style-type: none"> • VOC- and solvent-free catalyst based on zinc 2-ethylhexanoate with moderate reactivity for solventborne and solvent-free one- and two-component polyurethane coatings and chemical synthesis
Borchi® Kat 0243	Bi, Li	11.75	0.02-0.06	Medium	<ul style="list-style-type: none"> • Catalyst based on a combination of metal neodecanoates for polyurethane reactions diluted in dearomatized white spirit • Especially for solventborne one- and two-component polyurethane clear coats and two-component polyurethane adhesives as well as for the modification of silicones
Borchi® Kat 0244	Bi, Zn	24	0.01-0.03	Medium	<ul style="list-style-type: none"> • VOC- and solvent-free catalyst based on a combination of metal carboxylates for polyurethane reactions • Especially for solventborne and solvent-free one- and two-component polyurethane clear coats and two-component polyurethane adhesives
Borchi® Kat 0245	Zn, Ca	4	0.05-0.20	Low	<ul style="list-style-type: none"> • Metal carboxylate-based catalyst with moderate reactivity especially for solventborne pigmented one- and two-component polyurethane coatings • Dissolved in xylene

^{*}Calculated on total solid binder

Application recommendations and data on the back →

Catalysts for 1K & 2K Polyurethane Systems

Tin-free metal carboxylates for urethanes



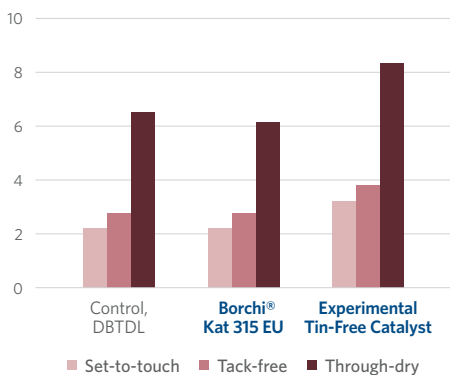
Catalyst recommendations for specific applications

Metal	Product Name	Waterborne	Solventborne	Solvent-Free	Unsaturated Polyester	2-comp. PU Coatings		Silicones	
						Clear	Pigmented	RTV 2-	PU- mod.
Bismuth	Borchi [®] Kat 21	○	●	●	○	●	●	○	○
	Borchi [®] Kat 24	○	●	●	○	●	●	○	●
	Borchi [®] Kat 315 EU	○	●	●	○	●	●	●	●
Zinc	Borchi [®] Kat 15	○	●	○	○	●	●	○	●
	Borchi [®] Kat 0761	○	●	●	○	●	●	○	○
	Borchi [®] Kat 19	○	●	●	○	●	●	○	○
	Borchi [®] Kat 22	○	●	●	○	●	●	○	●
Mixed Metals	Borchi [®] Kat 0243	○	●	○	○	●	●	○	●
	Borchi [®] Kat 0244	○	●	●	○	●	●	○	○
	Borchi [®] Kat 0245	○	●	○	○	○	●	○	○
Potassium	Borchers [®] Deca Potassium 12	○	●	○	●	○	○	○	○
	15% Potassium Hex-Cem [®] EU	●	●	○	●	○	○	○	○
Copper	Borchers [®] Deca Copper 8	○	●	○	●	○	○	○	○

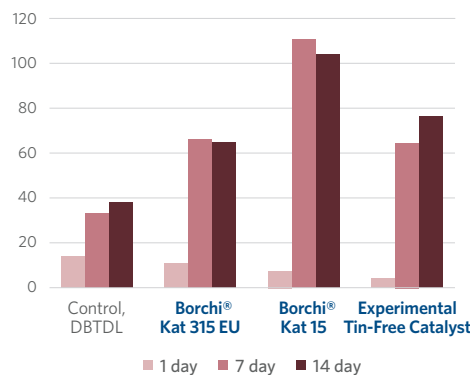
● Recommended ● Suitable ● Only in specific applications ○ Not suitable

Good dry times, hardness, and pot life with tin-free catalysts* compared to DBTDL

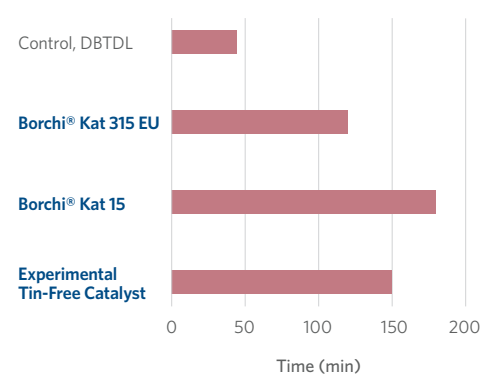
Faster Through-Drying Times with Borchi[®] Kat 315 EU
in hours, white topcoat for protective and marine



Better Hardness with Tin-Free Catalysts
in seconds, high solids white topcoat for metal



Longer Pot Life with Tin-Free Catalysts
40°C, white topcoat for airmix and airless application



*includes experimental tin-free catalyst currently in development



For more information, please reach us at borchers.com/contact

PLEASE NOTE: As each customer's use of our product may be different, information we provide, including without limitation, recommendations, test results, samples, care/labeling/processing instructions or marketing advice, is provided in good faith but without warranty and without accepting any responsibility/liability. Each customer must test and be responsible for its own specific use, further processing, labeling, marketing, etc. All sales are exclusively subject to our standard terms of sale posted at www.milliken.com/terms (all additional/different terms are rejected) unless explicitly agreed otherwise in a signed writing. Borchi is a trademark of Borchers Americas.

TIN-EU-02.27.2025

