

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 labelling required for popular dibutyltin dilaurate (DBTDL) catalysts
- In the European Union, appropriate labelling 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	Medium	<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 →

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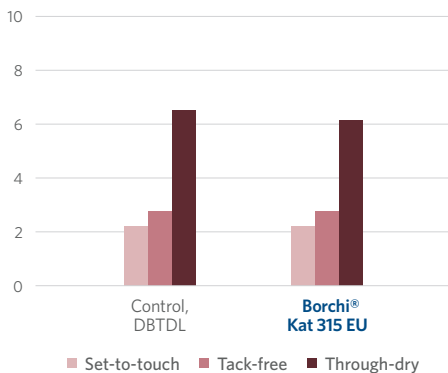
Catalyst recommendations for specific applications

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	○	●	○	●	○	○	○	○

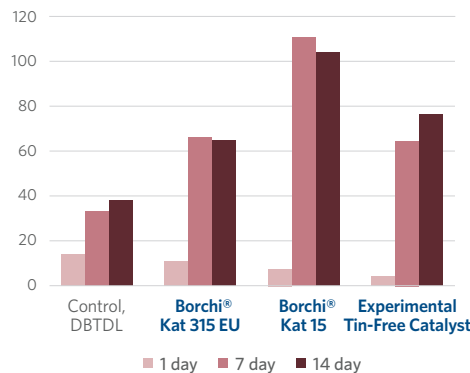
● Recommended ● Suitable ● Only in specific applications ○ Not suitable

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

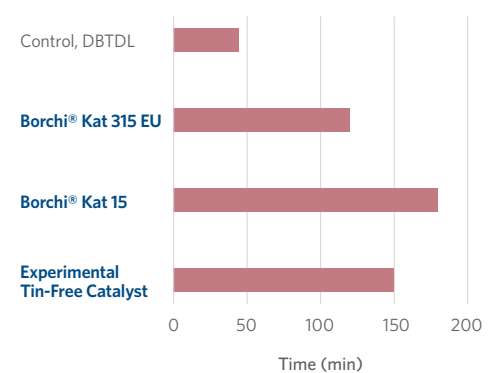
Faster Through-Drying Times with Borchi® Kat 315 EU
in hours, white topcoat for protective and marine



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

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