

Paint & Ink Driers

PORTFOLIO FOR PAINTS & COATINGS



TROY

The Gold Standard for Performance

2019
Global

The logo for TROY, featuring the word "TROY" in a bold, sans-serif font with a stylized diamond shape above the letter 'Y'.

Paint & Ink Driers Selection Guide



Element	Symbol	Typical use level % metal per resin solids	Description
Barium	Ba	0.20	Barium carboxylates improve through-drying of a coating and have good pigment wetting characteristics. They also demonstrate lower water sensitivity than Calcium carboxylates.
Bismuth	Bi	0.20	Bismuth is used as a substitute for lead. It strongly activates cobalt and improves through-drying properties and drying under adverse weather conditions (like Calcium does). Bismuth carboxylates are used in baking finishes to improve the hardness.
Calcium	Ca	0.20	Calcium carboxylates, by themselves, have minimal effectiveness as driers but are very useful when used in combination with active driers such as Cobalt and Manganese. Calcium driers help to improve hardness and gloss as well as to reduce skin-formation, silking, and blooming. They are also useful as pigment wetting/dispersing agents and loss-of-dry inhibitors. Calcium carboxylates are not recommended for coatings subjected to drying under adverse conditions.
Cobalt	Co	0.04	Cobalt carboxylates are the most effective oxidative catalysts at ambient temperatures. Cobalt driers produce fast surface dry to the film. They also are effective as accelerators for peroxide-initiated polyesters and epoxies.
Copper	Cu	0.15	Copper carboxylates possess some catalytic activity and tend to produce more consistent films.
Iron	Fe	0.06	Effective drying catalyst for baking finishes.
Lithium	Li	0.08	Lithium carboxylates promote through-drying. They are often used in High Solids coatings and water-dispersible alkyds. They do not lose their effectiveness even in cool environments.
Manganese	Mn	0.04	Manganese carboxylates improve the surface drying of a paint film and also possess some through-drying properties. They are frequently used as polymerization accelerators in baking finishes and low-temperature drying systems.
Potassium	K	0.10	Potassium carboxylates work synergistically with Cobalt in thermo-set systems.
Strontium	Sr	0.20	Strontium carboxylates improve through-drying under adverse conditions, such as high humidity and low temperatures.
Zinc	Zn	0.15	Zinc carboxylates demonstrate anti-oxidant properties. Zinc carboxylates keep auto-oxidative films "open," thus permitting hardening throughout. Zinc carboxylates are very effective wetting/pigment-dispersing agents.
Zirconium	Zr	0.20	Zirconium carboxylates improve the through-dry of auto-oxidative drying systems. They are used in combination with Cobalt and Calcium carboxylates. They are preferentially used as replacements for Lead.

Products

Function	Product	
Carboxylates from Synthetic Acids	Troymax™ Barium 12.5	
	Troymax Bismuth 24	
	Troymax Calcium 10NA	
	8NA	
	6NA	
	5NA	
	4NA	
	Troymax Calcium Octoate	6
		5
	Troymax Cobalt	12
		12 NEO
		10
		10 NEO
		8
		6
	Troymax Lithium	2
	Troymax Manganese	12
		10
		9
		6
	Troymax Potassium	15
	Troymax Strontium	10
	Troymax Zinc	16
		12
		10
		8
	Troymax Zirconium	24
	18	
	12	
	10	
	6	
Naphthenates	Troychem Copper 8	
	Troychem Zinc 8	
Loss of Dry Inhibitor	Troymax Perma Dry	
Water Dispersible	Troychem Calcium 6WD	
	Troychem Cobalt 6WD	
	Troychem Manganese 6WD	
	Troychem Zirconium 12WD	
	Troymax KC10	
	Troymax Lithium 2	
Non-Metallic Driers	Troymax 350	
Standard Drier Blends	Troymax CZ69	
	Troymax CSD	
	Troymax 123	
	Troymax 2002	
	Troymax KC10	
	Troymax BXPB	
Custom made Drier Blends can also be provided.		

Use Levels

Vehicle or Type	Cobalt	Manganese	Zirconium	Calcium
ALKYDS	Expressed as % metal on vehicle solids			
Long Oil Soya	.03 - .06	-	0.1 - 0.3	-
	.03 - .06	-	0.1 - 0.2	0.1 - 0.2
	.03 - .06	-	-	0.1 - 0.3
Medium Oil Soya	.02 - .04	-	0.05 - 0.1	0.05 - 0.1
	.02 - .04	-	0.1 - 0.2	-
Short Oil Soya	.01 - .03	-	0.05 - 0.1	-
	.01 - .03	-	-	0.05 - 0.1
	.01 - .03	-	0.05 - .01	0.05 - 0.1
Long Oil Linseed	.03 - .05	-	0.1 - 0.3	-
	.03 - .05	-	-	0.1 - 0.3
	.03 - .05	-	0.1 - 0.2	0.1 - 0.2
Medium Oil Linseed	.02 - .04	-	0.1 - 0.2	-
	.02 - .04	-	-	0.1 - 0.2
Long Oil (Others)	.03 - .06	-	0.1 - 0.3	0.1 - 0.3
	.03 - .06	-	-	-
Short Oil (Castor)	.01 - .03	-	0.1 - 0.2	0.1 - 0.2
	.01 - .03	-	-	-
Short Oil (Tall)	.01 - .03	-	0.1 - 0.2	-
	.01 - .03	-	-	0.1 - 0.2
OILS				
Linseed	-	.02 - .03	0.1 - 0.2	0.1 - 0.2
Raw	.02 - .03	-	0.1 - 0.2	0.1 - 0.2
Boiled	.01 - .02	.01 - .02	0.1 - 0.3	-
Alkali Refined	-	.02 - .03	0.1 - 0.2	-
Heat Bodied	.02 - .03	-	0.1 - 0.3	-
Soybean Raw	0.1 - 0.2	0.1 - .02	0.1 - 0.3	-
Heat Bodied	.05 - .1	.05 - 0.1	0.1 - 0.3	-
Calculation Example, 45 kg, resin at 50% solids = 22.5 kg resin solids. To incorporate 0.04% Cobalt on resin solids: 22.5 kg x 0.04% = 0.009 kg of Cobalt is required. This is provided by $\frac{0.009 \times 100}{12} = 0.075$ kg of Troymax Cobalt 12				

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