

ARIHANT Metallica manufactures wide variety of metal carboxylates from various metals or metal salts, using synthetic fatty acids in variety of solvents as per customer's need.

Metal carboxylates are used in vast applications mentioned as follows.

- Driers for
 - Solvent based coatings
 - Water based paints
 - Printing Inks
- Accelerators for UPR/FRP System
- PVC Stabilizers
- Catalyst
- Rubber Adhesion Promoters.
- Lubricant & Fuel Additives.

Metal Carboxylates used in Alkyd Resin Systems can be categorized as follows.

- **Surface / Primary Driers**
Oxidation Catalysts that helps coatings to dry on the surface. **Cobalt, Manganese & Iron** carboxylates acts as Surface Driers.
- **Through Driers**
Oxidation Catalysts that helps coatings to uniformly dry throughout the coating systems. **Lead, Strontium, Zirconium, lithium** carboxylates acts as Through Driers.
- **Auxiliary / Secondary Driers**
These are not Oxidation Catalyst of its own but play a very vital role to the action of other Catalyst when used in conjunction with them. **Calcium, Zinc, Barium** carboxylates acts as auxiliary Driers.

Cobalt Octoate

PROPERTIES

Cobalt Octoate is an extremely active & most widely used drier in coatings & capable of being used even as a single Drier. It is primarily an oxidation catalyst & acts as a "Surface Drier". It may have a tendency to cause surface wrinkling, hence, to provide uniform drying, it is generally used in combination with other auxiliary driers. It is generally added at 0.05 to 0.5% depending on the vehicle solids. Cobalt drier prevents atmospheric humidity to enter into paint films due to its unique property. This will help to increase gloss & reduce brittleness of the film. This drier is a universal drier, which is essential in all media.

As quantity of Cobalt Drier used is very small, it minimizes discoloration in paints & enamels as compared with other Driers. Cobalt does not discolor white paints as the deep blue color of the cobalt counteracts the yellow of the oils & resins & thereby enhances the whiteness of the paint. Cobalt is an effective accelerator for catalytic action of MEKP to polymerize unsaturated polyester resin.

APPLICATIONS

- Drier for Solvent & Water borne Coatings
- Drier for Printing Ink
- As rubber adhesion promoters in solid phase.
- Accelerator for UPR system

Sr. No.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+ / - 0.03)	Viscosity at 30°C (+ / - 3)
1.	COBALT OCTOATE (CAS 13-52-7)	BLUISH VIOLET	12	65	1.020	21
2.			10	52	0.97	13
3.			8	42	0.93	12
4.			6	37	0.88	12
5.			3	15	0.82	11

PACKING

Mild Steel / HDPE Drums of 180 / 200 Kgs & 22 / 25 / 45 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

Manganese Octoate

PROPERTIES

Manganese driers are intermediate in activity & they have both oxidizing & polymerizing properties & hence can be used as surface & through drier. It is used alone in backing finishes & along with Cobalt & Lead in air drying applications. When used in combination with Lead, hard tough & durable films are produced. It is mainly used for exterior paints, floor finishes, backing enamels, foundry chemicals etc. the dosage of Cobalt Octoate can be minimized by using Manganese Octoate as it is capable of replacing Cobalt because of its high activity.

One disadvantage in use of manganese driers is their relative dark color, which has a tendency to discolor white or light finishes.

Manganese gives good results in low temperature drying & in high humidity conditions.

Sr. No.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+/- 0.03)	Viscosity at 30°C (+ / - 3)
1.	MANGANESE OCTOATE (CAS 13434-24-7)	REDDISH BROWN	10	68	1.00	OPEN
2.			8	50	0.93	20
3.			6	37	0.89	13

APPLICATIONS

- Drier for Solvent & Water borne Coatings
- Drier for Printing Ink
- As bonding agent in Foundry chemicals.

PACKING

Mild Steel / HDPE Drums of 185 / 200 Kgs & 22 / 25 / 45 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

Lead Octoate

PROPERTIES

Lead is a through drier & is always used as active or top drier. It promotes hard & through drying throughout the film & also increases flexibility, toughness & durability of the film. Lead drier can give rise to precipitation in the film as, Lead Octoate reacts with unreacted phthalic anhydride of alkyd resin, which could form Lead Pthalate, which may cause haziness & loss of gloss. In order to avoid this it is advisable to add Calcium Octoate first which acts as emulsifier & improves the pigment dispersing & wetting properties. In exterior paints & floor finishes Lead is used along with Manganese to produce tough & hard film. It is also used in Polyurethane finishes as auxiliary drier. Lead drier improves the drying time of double boiled linseed oil. Lead Octoate also improves the water & salt resistance of the film making it useful to rust preventive coating.

Lead in combination with cobalt & calcium are suggested, particularly for long oil alkyds lead is the most important drier. However some of the problems connected with lead driers such as sulfur staining & reaction with polybasic acids are overcome by inclusion of calcium drier. As lead is toxic in nature its usage toys & edible film packaging is to be avoided. The most widely used metal that could replace lead driers are Zirconium & Strontium.

Sr. No.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+ / - 0.03)	Viscosity at 30°C (+ / - 3)
1.	LEAD OCTOATE (CAS 301-08-6)	PALE YELLOW	36	70	1.35	30
2.			32	62	1.23	20
3.			24	46	1.08	13
4.			18	32	0.98	12

APPLICATIONS

- Drier for Solvent in combination with Cobalt, Calcium & Manganese
- Drier for Printing Ink
- As bonding agent in Foundry chemicals.

PACKING

Mild Steel / HDPE Drums of 205 / 220 / 250 Kgs & 25 / 30 / 50 / 60 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

Calcium Octoate

Calcium being an auxiliary drier, has little drying action in itself but is very useful in combination with active driers like Cobalt & Lead Octoate.

In vehicles that show poor tolerance for lead, calcium can replace part of the lead with a larger amount of calcium to prevent the precipitation of the lead & maintain drying efficiency. Calcium is often used to replace lead where toxicity of lead must be avoided. Calcium is also useful as pigment wetting & dispersing agents & help to improve hardness & gloss while reduce "Skinning". When ground with drier adsorbing pigments, calcium minimizes loss of dry by being preferentially absorbed.

Sr. No.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+/- 0.03)	Viscosity at 30°C (+ / - 3)
1.	CALCIUM OCTOATE (CAS 27253-33-4)	Pale Yellow	10	52	0.98	18
2.			5	50	0.90	20
3.			3	30	0.84	12

APPLICATIONS

- Drier for Solvent in combination with Cobalt, Lead & Manganese.
- Driers for Lead free systems along with Cobalt & Strontium.

PACKING

Mild Steel / HDPE Drums of 180 / 200 Kgs & 22 / 25 / 45 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

Zinc Octoate

Zinc being an auxiliary drier, used in conjunction with redox metals. The primary function of zinc is to keep the film "Open" by retarding Surface dry, thus permitting hardening through out & preventing surface wrinkling, particularly in Cobalt containing films & enamels.

Zinc is a powerful wetting & dispersing agent, & when incorporated early in formulation, it greatly reduces the time of mixing & grinding. Because of the extremely light colour, Zinc can be added without discoloring the film.

Sr. No.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+ / - 0.03)	Viscosity at 30°C (+ / - 3)
1.	ZINC OCTOATE (CAS 85203-82-23)	TRACE YELLOW	18	75	1.06	16
2.			16	66	1.02	15
3.			12	50	0.93	12
4.		COLORLESS	6	25	0.83	11

APPLICATIONS

- Drier for Solvent & Water borne Coatings
- As loss of Dry Agent

PACKING

Mild Steel / HDPE Drums of 180 / 200 Kgs & 22 / 25 / 45 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

Zirconium Octoate

Zirconium is a most useful & efficient auxiliary drier. Zirconium like lead serves as a through drier & is generally used in combination with Cobalt, Manganese & Calcium. Unlike Lead, Zirconium is a poor pigment wetting & dispersing agent, hence combination with calcium is necessary.

Zirconium is an active cross-linking agent & as such improves hardness of stoved films as well as their adhesions.

Zirconium is not as effective in phenolic resin based media it is recommended as a catalyst for epoxy esters. Use of Lead driers in combination with Zirconium is to be avoided totally. Also Zirconium tends to yellowing & its performance under critical conditions like lower temperature.

Sr. No.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+ / - 0.03)	Viscosity at 30°C (+ / - 3)
1.	ZIRCONIUM OCTOATE (CAS 22464-99-9)	TRACE YELLOW	24	80	1.28	OPEN
2.			18	58	1.10	15
3.			12	40	0.98	12
4.			6	20	0.88	11

APPLICATIONS

- Drier for Solvent & Water borne Coatings
- Drier for Lead free applications

PACKING

Mild Steel / HDPE Drums of 180 / 200 / 225 / 250 Kgs & 22 / 25 / 45 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

Copper Octoate

Copper is an anti fouling agent. It is used in ship bottoms paints. Copper Octoate Hydrolyses gradually in to Copper Hydroxide & Octoic Acid in the presence of seawater, Copper Hydroxide is an active toxicant.

It is used as a rot proofing agent in textiles, cordage etc. & to prevent dry rot & mildew growth in timber. Its insecticidal property is taken advantage of to impart a long lasting protection against termites, beetle & ambrosia & many other insects attacking timber/lumber, Copper may be applied on textile fabrics by dipping, spraying or impregnation. The recommended dosage is 2% to 2.5% as metal.

Sr. No.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+/- 0.03)	Viscosity at 30°C (+ / - 3)
1.	COPPER OCTOATE (CAS 92200-89-7)	DARK GREEN	10	63	0.99	23
2.			8.6	54	0.96	14
3.		GREEN	8	51	0.94	13
4.			6	35	0.88	12

APPLICATIONS

- Drier for Solvent borne Coatings
- As fungicide & termite resistant.

PACKING

Mild Steel / HDPE Drums of 180 / 200 Kgs & 22 / 25 / 45 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.



Barium Octoate

Barium can be used in place of lead and calcium. It does not give haze like lead in alkyds. It is mainly used in P.V. C. as heat and light stabilizer with cadmium.

Cadmium Octoate

Cadmium is used in P.V.C. Stabilizer with barium.

Sr. No.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+/- 0.03)	Viscosity at 30°C (+ / - 3)
1.	BARIUM OCTOATE	YELLOW	12	51	0.940	20
2.	CADMIUM OCTOATE	DARK YELLOW	15.5	55	1.020	30

Potassium Octoate

Miscible with organic solvents and oils. Suitable to use with other siccatives. Used for Polyester and Isocyanurate foam initiator. Potassium Octoate is used in conjunction with Cobalt for a synergistic effect and to reduce discoloration of the final Gel-Coat. Potassium may offer cost savings as well as a decline in gel-time drift.

Sr.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+ / - 0.03)	Viscosity at 30°C (+ / - 3)
1.	POTASSIUM OCTOATE	PALE BROWN	15	80	1.030	OPEN
			10	58	0.960	OPEN

APPLICATIONS

- Catalyst for UPR / FRP

PACKING

Mild Steel / HDPE Drums of 200 Kgs & 22 / 25 / 45 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

Cerium Octoate

Cerium (Rare earth) is a primary drier, promotes polymerization and imparts through drying property. In alkyd based varnishes Cerium is more active as compared to lead. In contrast with lead driers, Cerium does not cause turbidity in oils and alkyd based varnishes.

It has a synergistic effect when used in combination with Cobalt resulting in the need for using a lower percentage of Cobalt and thereby offering an economy. In air-drying white colourless or clear or pastel shades care must be taken to predetermine the quantity required to obtain satisfactory drying in order to avoid yellowing. As a replacement to lead, Cerium finds use in lead-free composition and where sulphur-containing pigments are used. It also resists atmospheric hydrogen sulphide stain.

Sr.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+ / - 0.03)	Viscosity at 30°C (+ / - 3)
1.	CERIUM OCTOATE	DARK BROWN	12	64	0.980	OPEN
2.			10	52	0.950	41
3.			8	34	0.900	29
4.		PALE BROWN	6	29	0.870	15

APPLICATIONS

- Drier for Solvent as lead replacement
- Drier for Printing Ink

PACKING

Mild Steel / HDPE Drums of 180 / 200 Kgs & 22 / 25 / 45 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

Nickel Octoate

Applications

- Used as a catalyst in rubber manufacturing
- Used as catalyst in top-grade printing ink
- Available for coating grinding dispersant, ultraviolet light absorbent, etc.

Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+ / - 0.03)	Viscosity at 30°C (+ / - 3)
NICKLE OCTOATE (CAS 4995-91-9)	GREEN	12	72	1.040	33
		10	61	0.99	16
		8	48	0.94	13
		6	35	0.89	12

Strontium Octoate

Strontium Octoate is replacement of Lead Octoate, where Lead free Paint/Ink is required. It improves through drying in adverse effect like high humidity & low temperatures. Strontium seems to overcome the insufficient Zirconium performance. Also unlike Zirconium, Strontium avoids yellowing. Strontium is also a good pigment wetting & dispersing agent preventing haze & wrinkling.

Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 1200C/Hr (+ / - 5)	Specific Gravity at 300C (+/- 0.03)	Viscosity at 300C (+ / - 3)
STRONTIUM OCTOATE (CAS 2457-02-5)	TRACE YELLOW	10	63	0.96	19
		6	32	0.89	13

APPLICATIONS

- Drier for Solvent as lead replacement
- Drier for high solid systems.

PACKING

Mild Steel / HDPE Drums of 180 / 200 Kgs & 22 / 25 / 45 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

Iron Octoate

Iron Octoate is used in backing finishes, since it promotes rapid drying by polymerization. When used in air drying system it improves through drying. It is an excellent wetting agent for carbon black & iron oxide. It prevents adsorption of driers on the surface of the pigments & increases gloss. In air-dry finishes it is useful in eliminating film tackiness of paints containing a high percentage of non-drying oil component such as fish oil. It can be used as an adhesion promoter in the anti corrosion coatings & as a replacement of Lead in Aluminium Paints.

Sr.	Products	Color	Metal Content % (+/- 0.2)	Non Volatile at 120°C/Hr (+ / - 5)	Specific Gravity at 30°C (+ / - 0.03)	Viscosity at 30°C (+ / - 3)
1.	IRON OCTOATE	REDDISH BROWN	6	60	0.950	17

APPLICATIONS

- Drier for Solvent
- Drier for Baking systems.

PACKING

Mild Steel / HDPE Drums of 200 Kgs & 25 / 50 Kgs

STORAGE PARAMETERS

Twelve Months in original container at Ambient Temperature.

SPECIFICATIONS OF COMBINATION DRIERS

COMBINATION	Metal	Color	Non Volatile at 120°C/Hr (+ / - 3)	Specific Gravity at 30°C (+/- 0.03)	Viscosity at 30°C (+/- 3)
AM 025 (Enamel Paint)	Co 1.5%, Mn 1.5%, Pb 17.5%	PURPLE	49	1.00	15
AM 028 (For INK)	Co 2.6%, Mn 2.0%, Pb 8%	BROWN	39	0.94	13
AM 068 (Primer)	Co 0.6%, Mn 1.8%, Pb 10.8%	BROWN	35	0.94	13
AM 1425 (Primer)	Co 0.45%, Mn 2.15%, Pb 14%	BROWN	43	0.98	15
AM 0725 (Primer)	Co 0.25%, Mn 2.5%, Pb 17.5%	BROWN	52	1.04	18
AM 121	Co 1.2%, Pb 11.01%, Ca 2.17%	BLUE / VIOLET	40	0.97	15
AM 023 (White Enamel Paint)	Co 1.00%, Ca 2.0%, Zr 2.0%	BLUE / VIOLET	30	0.86	12
AM 031	Co 1.66%, Zn 4.66%	BLUE / VIOLET	26	0.87	14
AM 045	Co 4.5%, Ba 4.5%	BLUE / VIOLET	37	0.90	14

ENVIRONMENT FRIENDLY DRIERS

We have developed replacements of Toxic driers like Lead Octoate & Zirconium Octoate.

Also we have universal Combination Drier that can be used in all oxidative air drying & oil based coatings.

We have range of water-based driers for water borne oxidative air-drying coatings.