parth International

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## **PAINT DRIERS**

Sr. No.	Product	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) - Manganese driers are intermediate in activity & they have both oxidizing & polymerizing properties. When manganese used alone it may produce too hard & too brittle films. When used in combination with Lead, hard tough & durable films are produced. One disadvantage in use of manganese driers is their relative dark color, which has a tendency to discolor white or light finishes.	BROWN	10 8 6	68 50 37	1 0.93 0.89	OPEN 20 14
2	<b>COBALT OCTOATE</b> - 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. Cobalt is generally used in combination with other metals such as Manganese, Zirconium, Calcium & Combinations of these metals.	BLUISH VIOLET	12 10 8 6 3	65 52 42 32 15	1.02 0.97 0.93 0.88 0.82	21 13 12 12 12 11
3	LEAD OCTOATE (CAS 301-08-6) - Lead is a through drier & is always used with cobalt &/or manganese. Lead drier improves the drying time of double boiled linseed oil & yields very pale & clear boiled oil. 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 sulpher 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.	PALE YELLOW	36 32 24 18	70 62 46 35	1.36 1.23 1.08 0.98	27 16 13 12
4	<b>CALCIUM OCTOATE (CAS 27253-33-4)</b> - Calcium being an auxiliary drier, has little drying action in itself but is very useful in combination with active driers. 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 & reduce "Silkins". When ground with drier adsorbing pigments, calcium minimizes loss of dry by being preferentially absorbed.	COLORLESS	10 5 3	52 50 30	0.98 0.90 0.84	14 20 12
5	<b>ZINC OCTOATE (CAS 85203-82-23)</b> - 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.	TRACE YELLOW COLORLESS	18 16 12 6	75 66 50 25	1.06 1.02 0.93 0.84	16 15 12 11
6	<b>ZIRCONIUM OCTOATE (CAS 22464-99-9)</b> - 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. 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.	TRACE YELLOW	24 18 12 6	81 58 40 23	1.3 1.1 0.98 0.88	OPEN 15 12 11



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7	<b>COPPER NAPTHANATE (CAS 92200-89-7)</b> - Copper is an anti fouling agent. It is used in ship bottoms paints. Copper Octoate hydrolyses gradually into 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 import 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.	DARK GREEN	10 8.6	63 55	0.99 0.96	23 15
		GREEN	8 6	51 40	0.95 0.88	14 13
8	<b>BARIUM OCTOATE</b> - 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. <b>CADMIUM OCTOATE</b> - Cadmium is used in P.V.C. Stabilizer with barium.	YELLOW	12	51	0.940	20
		DARK YELLOW	15.5	55	1.020	30
9	<b>CERIUM OCTOATE</b> - Cerium (Rare earth) is a primary drier, promotes polymerisation 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.	DARK BROWN	12 10	64 52	0.980 0.950	OPEN 41
		PALE BROWN	8	34 29	0.900 0.870	29 15
10	<b>POTASSIUM OCTOATE</b> - 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.	PALE BROWN	15 8.6	80 55	1.030 0.960	OPEN OPEN
11	NICKLE OCTOATE (CAS 4995-91-9) - 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.	GREEN	12	72	1.040	33
			10	61	0.99	16
			8	48	0.94	13
12	<b>STRONTIUM OCTOATE (CAS 2457-02-5)</b> - 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.		6	35	0.89	12
		TRACE YELLOW	10 6	63 32	0.96 0.89	19 13
13	<b>IRON OCTOATE</b> - Iron Octoate is used in backing finishes, since it promotes rapid drying by polymerization. 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.	REDDISH	6	60	0.950	17