# **TOPTINT**

Pigment Dispersions & Pigments for Elastomers rubbers and Latex

Legacy of Color -Since 1978

Krishna Industries offer a range of pigments and pigment dispersions for all types of Thermoplastic elastomers, rubbers and latex applications. As a single organization, we offer you an enhanced product portfolio, broader geographic reach, and local, reliable support.

Enhanced Product Portfolio: You can rely on us for the best quality <u>Pigments and pigment dispersions</u>. Whether you are into automotive sector, household appliances, medical devices, construction products, food industry, stationary items, toys or any other specialized kind products, we give color to all you do.

Techno-commercial Sales: Our talented sales and technical teams stay close to our customers and are available for support and consultation when needed. We know that timely, expert help is every bit as important as consistent, high-quality products. Our aim is to provide both on an ongoing basis. Contact us at sales@krishnadyes.net

#### Our Group Activity:

Krishna serves the paper, inks, coatings, leather, textile, pharmaceutical, food, plastics, wood, detergent and cosmetics industries worldwide. We look forward to discussing your coloration needs in your specific market.





#### **COATINGS - DIVISION**

### **KRISHNA INDUSTRIES**

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## **Products for Thermoplastic Elastomers, Rubber & Latex**

## TOPTINT PPTE, PPR and PPLx Series - Pigment Powder and Pigment Dispersions

Krishna offers extensive range of high quality pigments and pigment preparations. TOPTINT PPLx are used for Dipped Latex applications with a choice of economic purposes (without regulatory support) and in compliance with EU (EN 71-3, 71-9, AP (89)1 and US 21CFR 178.3297 regulations with & without usage limitations. Our TOPTINT PPTE & PPR are best suitable for the coloration of Thermoplastic elastomers and natural & synthetic rubber.

TOPTINT		Thermoplastic Elastomers				Rubber bber nate		General Properties					
Pigment Powder	Pigment Dispersion	Styrene block copolymers (SBC)	Thermoplastic oolyurethane (TPU)	Ethylene vinyl acetate (EVA)	Thermoplastic olefins (TPO)	_ ⊃ @	Dipped Latex	Fastness	Density (g/cm³)	Specific Surface (m²/g)	Average Particle Size (nm)	Bulk Volume (I/kg)	Acid & Alkali Resistence
Pigment Yellow 180		•/-	•/-	•/-	•/-	•/-	-/-		1.46/-	28/-	234/-	10/-	5/-
Pigment Yellow 83	Yellow PP-TE01,R01,Lx01	•/-	•/-	•/¤	•/-	•/¤	-/¤	6to7**/5*	1.49/1.06	80/-	35/-	4/-	5/5
Pigment Yellow 17		•/-	•/-	•/-	•/-	•/-	-/-		1.39/-	63/-	45/-	4/-	5/-
Pigment Yellow 155		~/-	~/-	•/-	•/-	•/-	-/-		1.40/-	52/-	-/-	5/-	5/-
Pigment Yellow 14	Yellow PP-Lx02	•/-	•/-	•/-	•/-	•/-	-/¤	-/5*	1.39/-	39/-	94/-	7.8/-	5/-
Pigment Yellow 13	Yellow PP-TE03,R03,Lx03^	•/-	•/-	•/¤	•/-	•/¤	-/¤	6**/5*	1.34/1.13	39/-	70/-	4/-	5/5
Pigment Yellow 3	Yellow PP-Lx04^	-/-	-/-	-/-	-/-	-/-	-/¤	-/4to5*	-/-	-/-	-/-	-/-	-/-
Pigment Yellow 74	Yellow PP-Lx05^	-/-	-/-	-/-	-/-	-/-	-/¤	-/3to4*	-/-	-/-	-/-	-/-	-/-
Pigment Orange 64		•/-	~/-	•/-	•/-	•/-	-/-		1.62/-	28/-	167/-	5.4/-	5/-
Pigment Orange 13	Orange PP-TE06,R06,Lx06^	•/-	-/-	•/¤	-/-	•/¤	-/¤	4to5**/4*	1.41/1.13	38/-	130/-	4.8/-	5/5
Pigment Orange 34		•/-	-/-	•/-	-/-	•/-	-/-		1.40/-	65/-	60/-	6.4/-	5/-
Pigment Red 122	Red PP-Lx07^	•/-	•/-	•/-	•/-	•/-	-/¤	-/5*	1.47/-	65/-	92/-	3.2/-	5/-
Pigment Red 53:1	Red PP-Lx08	•/_	•/-	•/¤	•/-	•/¤	-/-	2to3**/-	1.86/1.21	49/-	100/-	4/-	5/5
Pigment Red 170	Red PP-Lx09^	-/-	-/-	•/-	•/-	-/-	-/¤	-/5*	1.44/-	19/-	307/-	4/-	5/-
Pigment Red 48:3		•/-	•/-	•/-	•/-	•/-	-/-		1.84/-	28/-	208/-	5.5/-	5/-
Pigment Red 48:2		•/-	•/-	•/-	•/-	•/-	-/-		1.67/-	52/-	82/-	4.1/-	4/-
Pigment Red 57:1	Red PP-Lx10	•/-	•/-	•/-	•/-	•/-	-/¤	-/5*	1.68/-	60/-	76/-	4.2/-	4/-
Pigment Red 254	Red PP-Lx11`	•/-	•/-	•/-	•/-	•/-	-/¤	-/5*	1.62/-	28/-	182/-	2.5/-	5/-
Pigment Red 112	Red PP-Lx12^	-/-	-/-	-/-	-/-	-/-	-/¤	-/3to4*	-/-	-/-	-/-	-/-	-/-
Pigment Violet 19	Violet PP-Lx13	•/-	•/-	•/-	•/-	•/-	-/¤	-/5*	1.47/-	65/-	101/-	5/-	5/-
Pigment Violet 23	Violet PP-Lx14^	•/-	•/-	•/-	•/-	•/-	-/¤	-/5*	1.49/-	83/-	39/-	3.5/-	5/-
Pigment Blue 15	Blue PP-Lx15`	~/-	~/-	~/-	~/-	•/-	-/¤	-/5*	1.60/-	66/-	68/-	3.5/-	5/-
Pigment Blue 15:1	Blue PP-TE16,R16,Lx16^`	•/-	•/-	•/¤	•/-	•/¤	-/¤	8**/5*	1.63/1.19	64/-	25/-	3.5/-	5/5
Pigment Blue 15:3	Blue PP-Lx17^`	•/-	•/-	•/-	•/-	•/-	-/¤	-/5*	1.62/-	57/-	90/-	4/-	5/-
Pigment Green 7	Green PP-TE18,R18,Lx18^	•/-	•/-	•/¤	•/-	•/¤	-/¤	8**/5*	2.06/1.48	39/-	49/-	3.3/-	5/5

#### For Latex

- Complies US FDA regulation 21CFR 178.3297
- Complies EU toy regulations EN 71-3 & 71-9 and AP(89)1
- Pigment Powder highly Recommended Pigment Dispersion highly Recommended Not Applicable or Available Pigment Powder/Dispersion Suitable
- Pigment Preparation Bleed Fastness (90°C, 5h) For Latex
- Pigment Preparation Light fastness (Reduction) For Rubber

#### Regulations

In general, the manufacturer of the formulation is responsible for using ingredients that meet the local legislative requirements. We at Krishna provide our customers with comprehensive technical support and maintain up-to-date information about the legal requirements applying to our products.

EN 71/3 - Migration of certain elements: Heavy metals

This part of the European norm specifies the requirements and test methods for the migration of the heavy metal elements antimony, arsenic, barium, cadmium, chromium, lead, mercury and selenium from toy material. It refers, among others, to the following toy materials: Materials for writing, drawing or painting (e.g. graphite materials or colored leads in pencils and liquid ink in fountain pens). More stringent requirements are valid, among others, for modelling clay and gels.

#### EN 71/9 - Organic chemical compound

EN 71/9 defines requirements for selected organic compounds in certain toys and toy materials. The regulation EN 71/9 lists in table 1 the specific toy and toy components with the respective limit requirements for the chemical compounds.

European Resolution AP (89) 1- On the use of colorants in plastic materials coming into contact with food

The European Regulation AP (89) 1 defines purity criterial for colorants: Heavy metal limits, Limit for primary aromatic amines & Limit for polychlorinated biphenyls (PCB)

Krishna

Coatings - Division

21 CFR. § 178.3297. Colorants for Polymers

The colorants are listed with their chemical names and/or with their color index generic names. Many of the colorants are subject to restrictions on: > Polymer Types, > Conditions of use.

- > Upper limit color concentration in the polymer, > Food types, (aqueous, acidic, fatty, low alcohol, high alcohol), and/or

Conditions of Use describe the temperature conditions the colored polymer may be subject to and are described as follows:

- A. High temperature heat sterilized (e.g. over 100 °C/212 °F) B. Boiling water sterilized

  - C. Hot filled or pasteurized above 66 °C (150 °F) D. Hot filled or pasteurized below 68 °C (150 °F)

  - E. Room temperature filled and stored (no thermal treatment in the container) F. Refrigerated storage (no thermal treatment in the container)
  - G. Frozen storage (no thermal treatment in the container)
  - H. Frozen or refrigerated storage: Ready prepared foods intended to be reheated in the container at time of use