

PIGMENTOS



Iron Oxide Red

Iron Oxide Yellow

Iron Oxide Black

Iron Oxide Brown

Titanium Dioxide



Koel's regulated, high - purity synthetic and natural colourants confirm to both US & EC colour specification and meet Directive 95/45/EC. Natural colours are classified by the FDA as "exempt from certification" colours. Exempt colours are regulated by the code of Federal Regulations (CFR) Title 21 part 73.

KOELIN TiO₂ ANATASE (Food Grade) (Koelin/PH-910)

High Purity
High Dispersability
Pharmaceutical Grade

CONFIRMS TO: IP/EP/USP/ & EC DIRECTIVES 95/94 (E 171)
FDA TITLES 21 CFR 73.575 / 21 CFR 73.1575 / 21 CFR 73.2575
FOOD - (FCC) V

FREE FROM : Residual Solvents, Latex GMO, BSE, AOX Halogen, Animal Testing & VOC

Common Name	Iron Oxide Red	Iron Oxide Yellow	Iron Oxide Black	Iron Oxide Brown
Koelin Code No	Koelin/PH - 919	Koelin/PH - 929	Koelin/PH - 999	Koelin/PH - 991
Colour Index No	77491	77492	77499	77491/92/99
E.E.C No	E - 172	E - 172	E - 172	E - 172
CAS No	1309-37-1	51274-00-1	12227-89-3	1309-37-1/51274-00-1/12227-89-3
Identification Of Ferric Salt	As Per USP	As Per USP	As Per USP	As Per USP
Water Soluble substance, percent by mass	Max 1.00	Max 1.00	Max 1.00	Max 1.00
Acid insoluble substances, percent by mass	Max 0.3	Max 0.3	Max 0.3	Max 0.3
Organic colours & lakes	As Per USP	As Per USP	As Per USP	As Per USP
Mercury(mg/kg)	Max 1.0	Max 1.0	Max 1.0	Max 1.0
Arsenic (mg/kg)	Max 3.0	Max 3.0	Max 3.0	Max 3.0
Lead (mg/kg)	Max 10.0	Max 10.0	Max 10.0	Max 10.0
Assay as Fe ₂ O ₃ on ignited basis	97.0%-100.5%	97.0%-100.5%	97.0%-100.5%	97.0%-100.5%
Microbial Limit Test :				
A) Total Microbial Count	NMT 50 cfu/g	NMT 50 cfu/g	NMT 50 cfu/g	NMT 50 cfu/g
B) E.Coli NMT 50 cfu/g	Absent in 10g	Absent in 10g	Absent in 10g	—
C) Salmonella	Absent in 10g	Absent in 10g	Absent in 10g	Absent in 10g
D) Pseudomonas	Absent in 10g	Absent in 10g	Absent in 10g	Absent in 10g
E) S.aureus	Absent in 10g	Absent in 10g	Absent in 10g	Absent in 10g
F) Yeast & Mold	NMT 50 cfu/g	NMT 50 cfu/g	NMT 50 cfu/g	NMT 50 cfu/g

Note: Koel also offer pharma grade of Titanium Dioxide with the certificate of IP, BP USP, JP
Koel can offer various shades in Iron Oxides i.e 6 shades in Iron Oxide Red, 3 shades of Iron Oxide Yellow & 2 shades of Iron Oxide Black. And also customised shade can be given as per the customers request.

APPLICATION OF INORGANIC COLOURS:

Pharmaceuticals:

- Coated And Compressed Tablets
- Gelatin Capsules (hard & Soft)

Colour Cosmetics & Personal Care Products:

- Nail Enamels
- Lip Products
- Eye Products

Nutraceuticals

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Koel offers the complete range of Aluminium Lake colours produced by the adsorption of water-soluble dye onto a hydrated aluminium substrate rendering the colour insoluble in water. These can be used to colour the end product either directly or by coating onto the surface of the product.

KOELOR range of colours has extremely high colour value and has a very fine particle size with high degree of consistency.

KOELOR Lake colours are more stable than the water-soluble colours, thus it is widely used in Cosmetics, Pharmaceutical & Food industries. Koel offers Koel lake colours in three concentrations: 12 - 17 %, 22- 27%, 32 - 40 %. Any other concentration apart from the standard concentration on request will be available.

Any specific shade to be customized in Aluminium lakes can be done as well.

Common Name	Lake Tartrazine	Lake Sunset Yellow	Lake Brilliant Blue	Lake Indigo Carmine	Lake Allura Red
Koel Code No	Koel/PH - 180	Koel/PH - 851	Koel/PH - 900	Koel/PH - 150	Koel/PH - 351
Colour Index No	19140:1	15985:1	42090:1	73015:1	16035:1
E.E.C No	E102	E110	E133	E132	E129
FD&C No / D & C Ni	Yellow 5	Yellow 6	Blue 1	Blue 2	Red 40
Pigment No	Yellow 100	Yellow104	—	Blue 63	—
Heat Resistance	90	90	90	90	90
Dye Content % Regular	12-17 %	12-17%	12-17 %	12-17%	12-17 %
Premium	22-27 %	22-27%	22-27 %	22-27 %	22-27 %
Extra Premium	32-40 %	32-40 %	32-40 %	32-40 %	32-40 %
Loss On Drying at 105C	17	17	17	17	17
2 Hrs(Not More Than) %	—	—	—	—	—
pH	3.5-7.5	3.5-7.5	3.5-7.5	3.5-7.5	3.5-7.5
Arsenic PPM (MAX)	3	3	3	3	3
Lead PPM (MAX)	10	10	10	10	10
Heavy Metals PPM (MAX)	40	40	40	40	40
Mercury	1	1	1	1	1

Common Name	Lake Erythrosine	Lake Ponceau 4R	Lake Carmoisine	Lake Amaranth	Lake Quinoline Yellow
Koel Code No.	Koel/PH -305	Koel/PH - 255	Koel/PH -201	Koel/PH - 185	Koel/PH - 051
Colour Index No	45430:1	16255:1	14720:1	16185:1	47005:1
E.E.C No	E127	E124	E122	E123	E104
FD&C No/D & C No	Red 3	—	—	—	D & C Yellow
Pigment No	Red 172	—	—	Red 193	Yellow 115
Heat Resistance	90	90	90	90	90
Dye Content % Regular	12-17 %	12-17 %	12-17%	12-17%	12-17 %
Premium	22-27 %	22-27 %	22-27%	22-27%	22-27 %
Extra Premium	32-40 %	32-40 %	32-40 %	32-40 %	32-40 %
Loss On Drying at 105C	17	17	17	17	17
2 Hrs(Not More Than) %	—	—	—	—	—
pH	3.5-7.5	3.5-7.5	3.5-7.5	3.5-7.5	3.5-7.5
Arsenic PPM (MAX)	3	3	3	3	3
Lead PPM (MAX)	10	10	10	10	10
Heavy Metals PPM (MAX)	40	40	40	40	40
Mercury	1	1	1	1	1

NOTE: All combinations can be made as per customer specification.

APPLICATIONS:

Food Uses:

- Bakery Products: Icings, fillings, sugar decorations and oil based coatings.
- Confectionery: Candy and confectionery coatings and chewing gums.
- Dairy Products: Ice creams, yoghurts, and wax coatings for cheese.
- Dessert Products: Gelatins, puddings and beverage bases.
- Seasoning Products: Snack food coatings and mixes, spice mixes.

Pharmaceutical Uses:

- Coated and compressed tablets, gelatin (soft and hard) capsules.

Non Food Uses:

- Personal Care: Lipsticks, blushers, creams, lotions, and cosmetic powders.
- Packaging: Plastic films and wax coated packagings, Can linings. (Medium and high strength are recommended for these applications)
- Inks: Flexographic and Lithographic (High strength lakes are recommended for use in Inks)

SPECIFICATION CHART

Common Name	Allura Red	Tartrazine	Sunset Yellow	Brilliant Blue	Indigo Carmine	Erythrosine
Koelow CODE NO.	Koelow - 351	Koelow - 180	Koelow - 851	Koelow -901	Koelow - 150	Koelow - 301
2 COLOUR INDEX NO.	16035	19140	15985	42090	73015	45430
E.E.C. NO.	E129	E102	E110	E133	E132	E127
FD&C NO./D&C NO	Red 40	Yellow 5	Yellow 6	Blue 1	Blue 2	Red 3
Colour Index Reference (food)	Red 17	Yellow 4	Yellow 3	Blue 2	Blue 1	Red 14
Indian Standard No.	—	1694	1695	6406	1698	1697
3 PURITY TEST						
Pure Dye Content (% MIN)	85	87	87	85	85	87
Loss On Drying At 135°C & Sodium Chloride/sulphates (% MAX)	14	13	13	15	15	13
Water Insoluble Matter (% MAX)	0.2	0.2	0.2	0.2	0.2	0.2
Ether Extractable Matter (% MAX)	0.2	0.2	0.2	0.2	0.2	0.2
Subsidiary Dyes (% MAX)	3	1	3	3	1	4
Organic Compounds other than Colouring Matters (% MAX)	1.5	0.5	0.5	1.8	0.5	0.4
Unsulphonated Primary Aromatic Amines (% MAX)	0.01	0.01	0.01	0.01	0.01	N.A.
Arsenic (AS 'As') PPM (MAX)	3	3	3	3	3	3
Lead (AS 'Pb') PPM (MAX)	10	10	10	10	10	10
Mercury (AS 'Hg') PPM (MAX)	1	1	1	1	1	1
Cadmium (AS 'Cd') PPM (MAX)	1	1	1	1	1	1
Heavy Metals PPM (MAX)	40	40	40	40	40	40
pH3	Stable	Stable	Stable	Slight Fade After 10 Days	Appreciable Fade After 9 Days	Precipitate (Insoluble)
pH7	Stable	Stable	Stable	Very Slight Fade After 8 Days	Considerable Fade After 6 Days	Stable
pH8	Stable	Stable	Stable	Very Slight Fade After 6 Days	Fades Completely	Stable

(continue...)

Common Name	Amaranth	Carmoisine	Ponceau 4R	Quinoline Yellow WS	Brown HT	Black PN	Patent Blue V
Koelow CODE NO.	Koelow -	Koelow - 201	Koelow - 255	Koelow - 057	Koelow -582	Koelow - 082	Koelow -024
2 COLOUR INDEX NO.	16185	14720	16255	47005	20285	28440	42051
E.E.C. NO.	E123	E122	E124	E104	E155	E151	E131
FD&C NO.-	—	—	—	Yellow 10	—	—	—
Colour Index Reference (food)	Red 9	Red 3	Red 7	Yellow 13	Brown 3	Black 1	Blue 5
Indian Standard No.	—	2923	2558	—	—	—	—
3 PURITY TEST							
Pure Dye Content (% MIN)	85	85	82	70	70	80	85
Loss On Drying At 135°C Sodium Chloride/sulphates (% MAX)	15	15	18	30	30	20	15
Water Insoluble Matter (% MAX)	0.2	0.2	0.2	0.2	0.2	0.2	—
Ether Extractable Matter (% MAX)	0.2	0.2	0.2	0.2	0.2	0.2	—
Subsidiary Dyes (% MAX)	3	1	1	4	10	10	2
Organic Compounds other than Colouring Matters (% MAX)	0.5	0.5	0.5	0.5	0.7	0.8	0.5
Unsulphonated Primary Aromatic Amines (% MAX)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Arsenic (AS 'As') PPM (MAX)	3	3	3	3	3	3	3
Lead (AS 'Pb') PPM (MAX)	10	10	10	10	10	10	10
Mercury (AS 'Hg') PPM (MAX)	1	1	1	1	1	1	1
Cadmium (AS 'Cd') PPM (MAX)	1	1	1	1	1	1	1
Heavy Metals PPM (MAX)	40	40	40	40	40	40	40
pH3	Stable	Stable	Stable	Stable	Stable	Stable	Appreciable Fade after 8days
pH7	Stable	Stable	Stable	Stable	Stable	Stable	Appreciable Fade after 8 days
pH8	Stable	Stable	Stable	Stable	Stable	Stable	Appreciable Fade after 8 days

- 1) KOELINK **Solvent based** : KOELINK SB is shellac based in solvent medium
- 2) KOELINK **Water based**: KOELINK WB is shellac based in water medium

Product	Code No.	C.I No. of Pigment
KOELINK White	WB- 9001	77891
	SB- 9001	77891
KOELINK Black	WB- 9999	77499
	SB- 9999	77499
KOELINK Red	WB- 9035	16035:1
	SB- 9035	16035:1
	WB- 9070	75470
	SB- 9070	75470
	WB- 9055	16255
	SB- 9055	16255
KOELINK Blue	WB- 9090	42090:1
	SB- 9090	42090:1
KOELINK Yellow	WB- 9040	19140:1
	SB- 9040	19140:1

For curing the ink, as such there is no particular method to cure the ink but air drying is the recommended curing method.

The addition of mixed solvent may be required to maintain a viscosity appropriate for the application method.

The cleaner or water are recommended for removing excess ink from the printing equipment. To remove dried ink deposits, a strong alkali such as Tri Sodium Phosphate is suggested, parts must be thoroughly rinsed with water after cleaning.

GLOBAL CERTIFICATES



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