

# Water-based Colorants for Paper

## Applications

For coloring printing paper, white paperboard, cast-coated paper, wallpaper, origami (colored paper for folding), paper files, conductive paper, light shielding paper, etc.

## Characteristics

- Colorants for paper coating, consisting of a water-based pigment dispersion with fine and stable particles.
- We offer exclusive products for bluing, in addition to our general-purpose products.
- Selectable between anionic and nonionic types according to the type of base paper and coating solution.
- Excellent in dispersion stability and compatibility with binders.
- Capable of performing color matching and color mixing between products as desired.
- Free from oil spots on the coating film.
- Excellent in water resistance, heat resistance and lightfastness of colored coating film.

## Representative Products

Type	Product name	Main pigment used	Heat resistance*1	Light fastness*2
Anion	416 Yellow	Disazo-yellow	5	3
	906 Yellow	Disazo-yellow	5	3
	307 Red	Naphthol AS-red	5	3
	516 Green	Chlorinated copper phthalocyanine	5	8
	536 Blue	Copper phthalocyanine ( $\alpha$ )	5	7-8
	556 Blue	Copper phthalocyanine ( $\alpha$ )	5	7-8
	708 Blue	Copper phthalocyanine ( $\beta$ )	5	8
	1516 Violet	Dioxazine	5	7
	1731 Black(J)	Carbon black	5	8
Anion Nonion	506 Orange	Pyrazolone	5	3
	1525 Blue G	Copper phthalocyanine ( $\alpha$ )	5	7-8
Nonion	2505 Violet 3R	Dioxazine	5	7
	500 Yellow R	Disazo-yellow	5	3
	910 Yellow FR	Disazo-yellow	5	5
	720 Red 2B	Naphthol AS-red	5	5
	1100 Red FG-N	Condensed azo	5	5-6
	510 Green B	Chlorinated copper phthalocyanine	5	8
	520 Blue 2B	Copper phthalocyanine ( $\alpha$ )	5	7-8
	700 Blue GA	Copper phthalocyanine ( $\beta$ )	5	8
	1500 Violet 3RN	Dioxazine	5	7
	510 Black TR	Carbon black	5	8

\*1: Heat resistance test : The colored base paper is heated at 150°C for 10 minutes in a hot air dryer, and the degree of discoloration is evaluated on a 5-point scale.

\*2: Lightfastness test : The degree of discoloration is evaluated on an 8-point scale after 120 hours of light exposure using a fade-o-meter.

\*The above data represents our internal experimental data and is not guaranteed.

## Applications

For coloring base paper for decorative board, colored base paper for wallpaper, washing-resistant paper, fruit-growing paper, paper for fresh fruit, tire wrapping paper, company envelopes, insulating paper, conductive paper, etc.

## Characteristics

- Colorants for papermaking consisting of a water-based pigment dispersion with fine and stable particles using a low-foaming surfactant.
- Capable of being easily mixed in a beater machine due to water-dispersed pigments with uniformly micronized particles.
- Excellent in pigment yield because of low-foaming tendency during papermaking process.
- Excellent in dispersion stability.
- Capable of performing color matching and color mixing between products as desired.
- Excellent in heat resistance, lightfastness and chemical resistance.

## Representative Products

Product name	Main pigment used	Solvent resistance*1		Heat resistance*2	Light fastness*3
		methanol	MEK		
1837 Yellow	Monoazo-yellow	4-5	3	5	3
1957 Yellow	Disazo-yellow	5	4	5	5
1387 Red(J)	Naphthol AS-red	4	2	4	5
1534 Blue(J)	Copper phthalocyanine ( $\alpha$ )	5	5	5	7-8
1737 Blue	Copper phthalocyanine ( $\beta$ )	5	5	5	8
3636 Violet(J)	Dioxazine	5	5	5	7
1731 Black(J)	Carbon black	5	5	5	8
1056 Yellow	Yellow iron oxide	5	5	5	8

### Evaluation of solvent resistance and heat resistance

Grade 5 : No discoloration (color contamination) is observed.  
 Grade 4 : Slight discoloration (color contamination) is observed.  
 Grade 3 : Moderate discoloration (color contamination) is observed.  
 Grade 2 : Significant discoloration (color contamination) is observed.  
 Grade 1 : Severe discoloration (color contamination) is observed.

### Evaluation of light fastness

Grade 8 : No discoloration is observed.  
 Grade 1 : Completely decolorated.

\*1: Solvent resistance test : The discoloration of the colored base paper and the color contamination of the remaining solvent are evaluated on a 5-point scale after a 1 cm<sup>2</sup> piece of the paper is soaked in 2 ml of solvent for 1 hour.

\*2: Heat resistance test : The colored base paper is heated at 150°C for 10 minutes with a hot air dryer, and the degree of discoloration is evaluated on a 5-point scale.

\*3: Lightfastness test : The degree of discoloration is evaluated on an 8-point scale after 120 hours of light exposure using a fade-o-meter.

\*The above data represents our internal experimental data and is not guaranteed.