

PERMANSA YELLOWS

(Hansa Yellows)

Permansa Yellows are organic toners produced from nitro aromatic amines and aceto-acetic arylides. They have extremely high tinctorial strength and excellent lightfastness when used in high concentration. They possess good resistance to alkali and are widely used where this property is desired. They also replace Chrome Yellows in many formulations in which the presence of lead cannot be tolerated. They are expected to be used in increasing amounts in the future because of the drive against lead in paints in certain areas.

Resistance of Permansa Yellows to light, heat, acid, and alkali is:

	<u>Shade</u>	<u>Light</u>	<u>Heat</u>	<u>Acid</u>	<u>Alkali</u>
Permansa Yellow 10G	Primrose	Excellent	Fair	Good	Good
Permansa Yellow G	Light	Excellent	Good	Good	Good
Permansa Yellow M	Medium	Excellent	Good	Good	Good

All are non-bleeding in varnish and water, but bleed slightly in alcohol, paraffin, and coal tar thinners. Permansa Yellows bronze when baked at temperatures over 180°F.

The Permansa Yellows are recommended for water and emulsion paints because of their good alkali resistance.

<u>Principal Standards</u>			<u>Special Standards</u>		
<u>S-W Code</u> <u>No.</u>	<u>PC&C</u> <u>Code No.</u>	<u>Description</u>	<u>S-W Code</u> <u>No.</u>	<u>PC&C</u> <u>Code No.</u>	<u>Description</u>
8101	12105	10G shade. Standard Primrose shade. Considerably lighter than G shade. Corresponds to Primrose Chrome Yellows.	(81 C 19)	12250	10G shade. Stir-in pulp of 8101. 25% solids.
			--	12251	G shade. Stir-in pulp of 8100. 20% solids.
8100	12101	G shade. Lemon shade. Standard shade for paint use. Three times as strong as Chrome Yellow Light.	--	12252	M shade. Stir-in pulp of 81 C 30. 20% solids.
81 C 30	12112	M shade. Medium shade. Considerably redder than 8100. Shade comparable to Medium Chrome Yellow. Good strength.	(81 C 17)	12261	G shade. Regular water pulp of 8100. 20% solids.
			(81 C 18)	12262	M shade. Regular water pulp of 81 C 30. 20% solids.

BENZIDINE YELLOWS

Benzidine Yellows are organic toners made from 3,3'-dichlor-benzidine and aceto-acetic arylides.

Compared to Permansa Yellows, regular Benzidine Yellows have higher tinting strength, but less permanence. Ordinarily Benzidine Yellows are not used in paints, enamels or lacquers because they are not light resistant enough and they have high oil absorptions. For certain special uses, the lightfast types of Benzidines listed below are recommended.

Resistance to heat is excellent, alkali and acid good, and light fair to poor. They are non-bleeding in varnish, water, and coal tar thinners. The baking is satisfactory for 1½ hours at 320°F.

<u>S-W Code</u> <u>No.</u>	<u>PC&C</u> <u>Code No.</u>	<u>Description</u>
81 C 32	12220	Lightfast type. Transparent. Lemon shade. High oil absorption.
--	12221	Lightfast type. Opaque. Lemon shade. High oil absorption. See Technical Bulletin C-44.

BENZIDINE YELLOWS (Continued)

<u>S-W Code</u> <u>No.</u>	<u>PC&C</u> <u>Code No.</u>	<u>Description</u>
--	12223	Lightfast type. Extremely transparent. Medium shade. High oil absorption. Use in <u>small amounts</u> with aluminum paste to make gold finish.
81 C 33	12222	Lightfast type. Very opaque. Medium shade, like Medium Chrome Yellow. High oil absorption. See Technical Bulletin C-44.

PERMANSA ORANGE

(Dinitraniline Orange)

Permansa Orange is 2,4-dinitraniline coupled with beta-naphthol. It has relatively good full tone lightfastness, but poor tinting permanency. It resists bleeding in oil and mild solvents, but bleeds slightly in lacquers. Frequent use is to shade Permansa Yellows.

<u>S-W Code</u> <u>No.</u>	<u>PC&C</u> <u>Code No.</u>	<u>Description</u>
8120	10369	Regular dinitraniline orange toner. Used for shading Permansa Yellow to deeper tones for all types of enamels.

PERMANSA ORANGE H

(Hansa Orange H)

Permansa Orange H is an azo type color made from meta-nitro-para-anisidine and aceto-acet-para-phenetide. A Hansa type color, it was developed for use in Kem Tint where an orange with good alkali resistance and resistance to discoloration was required.

<u>S-W Code</u> <u>No.</u>	<u>PC&C</u> <u>Code No.</u>	<u>Description</u>
81 C 34	10407	Made for use in dual tinting systems. It has relatively good light resistance and good alkali resistance.
(81 C 37)	10485	Stir-in pulp of 81 C 34. 25% solids.

PERMANENT ORANGES

(Orthonitraniline Oranges)

Permanent Oranges are made by coupling ortho-nitraniline with beta-naphthol. These organic oranges possess excellent permanence to light in full shade and poor in tints. They have good opacity but bleed slightly in water, oil, and coal tar thinners. Bleeding properties are similar to those of the Para Toners. Baking is satisfactory for 4 hours at 230°F.

<u>S-W Code</u> <u>No.</u>	<u>PC&C</u> <u>Code No.</u>	<u>Description</u>
81 C 39	10330	Regular orthonitraniline orange standard. Very poor lightfastness in tints. Used in mahogany fillers.
--	10376	Best standard. Trifle lighter, cleaner, and stronger than 81 C 39.

FLUSHED PERMANSA YELLOW

<u>S-W Code</u> <u>No.</u>	<u>PC&C</u> <u>Code No.</u>	<u>Pigment Name</u>	<u>Pigment</u> <u>Type</u>	<u>%</u> <u>Pigment</u>	<u>% Others</u>	<u>Wt./Gal.</u>
<u>Flushed in General Purpose Alkyd Varnish (37 C 18)</u>						
--	FL-12-302	Permansa Yellow G	8100	35%	34% Resin Solids 31% (145)	9.2

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CLASS 8100

Yellow, Orange and Brown Organic Pigments and Dyes

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I. ORGANIC YELLOWS

A. Pigments

Number	Name	Oil Abs. SW 419.2	Bulk G/100#	Remarks
8100	Permansa Yellow G	33	8.22	
8101	Permansa Yellow 10G	45	7.59	
81A2	Transparent Yellow X954			Restr; Tin Decorating
81A4	Arc Yellow 114-489		8.40	Restr; Graphic Arts
81A5	Saturn Yellow 114-496		8.40	Restr; Graphic Arts
81A7	Sunbonded Arc Yellow		8.92	Graphic Arts
81A8	Sunbonded Saturn Yellow		8.92	Graphic Arts
81C4	Fast Wool Yellow 3GL			Acid Dye Color Index 636
81C5	Metanil Yellow			Acid Dye Color Index 138
81C13	Yellow Dye, Oil Soluble			Stains
81C14	Yellow Dye, Toluene Soluble			Stains
81D1	Green Gold YT562D		5.90	
81F3	Lithosol Fast Yellow 3GD			Restr; Sherdye
81F11	Ahcovat Yellow GC			Restr; Sherdye
81F14	Metanil Yellow WS Ex-Conc.			
81N1	Sudan Yellow GRA Conc.			Vinyls

B. Dispersions

Number	Name	#/G	Remarks
81C17	Permansa Yellow G Pulp, 20%		Emulsions
81C18	Permansa Yellow M Pulp, 20%		Emulsions
81C19	Permansa 10G Pulp		
81C22	Benzidine Yellow Press Cake		Restr; Sherdye
81C23	Permansa M Pulp, 20%		
81C27	Benzidine Yellow Pulp		Sherdye
81D4	RRH Yellow P6-E151	8.85	Automotive
81F1	Lithosol Fast Yellow Paste		Restr; Sherdye
81F6	Carbanthrene Flavine GC Single Paste		
81F10	Yellow YB Press Cake		Restr; Sherdye

D. PV&L Bases

Number	%	Pigment	Vehicle	#/G
BY47	37.8	8100	(2538)	8.93
BY48	37.8	8101	(2538)	9.26
BY501	69	81C4		7.56
BY551	10	81C15	(414), (317)	7.21
BY1448	43.5	8101	(3966)	9.35
BY1449	37	8100	(3966)	8.95

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I. ORGANIC YELLOWS (Con't.)

Remarks

HANSA (PERMANSA) YELLOWS are toners produced from nitro-aromatic amines and aceto acetic arylides. They have high tinctorial strength and good light-fastness and durability in high concentrations. They often replace chrome yellow in lead-free formulations. They fail by fading on baking in contrast to the darkening chrome yellows. Good alkali resistance permits use in emulsion paints.

3100 Permansa Yellow G; three times as strong as chrome yellow.

8101 Permansa Yellow 10G; considerably lighter than 8100; corresponds to primrose chrome yellows.

II. ORGANIC ORANGES

A. Pigments

Number	Name	Oil Abs. SW 419.2	Bulk G/100#	Remarks
8120	Permansa Orange, Regular	32	8.28	
81A3	Fire Orange 114-487		7.80	Restr; Graphic Arts
81A6	Sunbonded Fire Orange		8.92	Graphic Arts
81C6	Wool Orange A Conc.			Acid Dye Index 151
81C12	Orange Dye, Oil Soluble			Stains
81C15	Orange Dye, Toluene Soluble			Stains
81D2	Intermix for 8120	32	8.28	
81F13	Orange II Conc. Special			
81N2	Sudan Orange RRA			
81Y2	Nippon Orange Toner		7.5	

B. Dispersions

Number	Name	Bulk G/100#	Remarks
81C20	Indo Orange Lake	6.45	
81C25	Benzidine Orange Pulp		
81C28	Benzidine Orange Pulp		
81F12	Parazolone Orange Pulp YB-3		

D. PV&L Bases

Number	%	Pigment	Vehicle	#/G	Remarks
BY90	34.6	8120	(2702) & (2539)	9.09	
BY503	2.5	81C6		7.49	
BY552	10	81C15	(414), (317)	7.21	
BY1450	33.3	8120	(3966)	8.84	

Remarks

PERMANSA ORANGE is 2,4-dinitraniline coupled with beta naphthol. It has relatively good fulltone lightfastness, but poor tinting permanency. It resists bleeding in oil and mild solvents, but bleeds slightly in lacquers. Frequent use is to shade Permansa Yellows.

8120 Permansa Orange, Regular

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III. ORGANIC BROWNS

A. Pigments

Number	Name	Bulk G/100#	Remarks
81C2	Mahogany Stain		Stains
81C3	Walnut Stain Powder		Stains
81C7	Resorcin Brown 5G Dye		
81C8	Orasol Brown G Dye		
81C9	Maple Stain Powder		Stains
81C10	Red Mahogany Stain Powder		Stains
81C11	Brown Dye, Oil Soluble		Stains
81C16	Walnut Stain Powder		Stains
81C21	Luxol Brown G Dye		Stains
81F4	Calcofast Spirit Brown G	8.80	

B. Dispersions

Number	Name	Bulk G/100#	Remarks
81C26	Pigment Brown Press Cake		Sherdye

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