

Decorative		Industrial			Automotive		Powder Coating			Specialty		
air drying	water-based	baking varnish	water-based	epoxy	PUR	OEM	car refinish	polyester	hybrid	epoxy	coil coating	LCD
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Application possibilities ● main application ○ side application



Versal® | organic pigments for paints

COLOURS FOR FUTURE



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TiO ₂		Trade Name Versal®	C. I. Pigment	Chem. Type	HP Pigment	Opacity
1:1	1:10					
Yellow 10G	Yellow 3	Yellow 10G	Yellow 3	Monoazo		medium
Yellow 8GN	Yellow 128	Yellow 8GN	Yellow 128	Disazo Cond.	●	low
Yellow H4G	Yellow 151	Yellow H4G	Yellow 151	Benzimidazolone	●	high
Yellow 3G	Yellow 93	Yellow 3G	Yellow 93	Disazo Cond.	●	medium
Yellow 5GD	Yellow 155	Yellow 5GD	Yellow 155	Bisacetoacetarylide	●	high
Yellow 4G	Yellow 155	Yellow 4G	Yellow 155	Bisacetoacetarylide	●	medium
Yellow 4GN	Yellow 155	Yellow 4GN	Yellow 155	Bisacetoacetarylide	●	medium
Yellow H3G	Yellow 154	Yellow H3G	Yellow 154	Benzimidazolone	●	medium
Yellow 5GXW	Yellow 74	Yellow 5GXW	Yellow 74	Monoazo		medium
Yellow 2GXS	Yellow 74	Yellow 2GXS	Yellow 74	Monoazo		high
Yellow 2GXD	Yellow 74	Yellow 2GXD	Yellow 74	Monoazo		high
Yellow GR	Yellow 95	Yellow GR	Yellow 95	Disazo Cond.	●	low
Yellow 5RD	Yellow 139	Yellow 5RD	Yellow 139	Isoindoline	●	high
Yellow 6RD	Yellow 139	Yellow 6RD	Yellow 139	Isoindoline	●	high
Yellow 3R	Yellow 110	Yellow 3R	Yellow 110	Isoindolinone	●	high
Orange RA	Orange 73	Orange RA	Orange 73	Diketopyrrolopyrrole	●	high
Orange HLD	Orange 36	Orange HLD	Orange 36	Benzimidazolone	●	high
Red 2G	Red 4	Red 2G	Red 4	β-naphthol		high
Scarlet 4RF	Red 242	Scarlet 4RF	Red 242	Disazo Cond.	●	low
Red HF3S	Red 188	Red HF3S	Red 188	Naphthol AS		medium
Scarlet DPEK	Red 255	Scarlet DPEK	Red 255	Diketopyrrolopyrrole	●	high
Scarlet R	Red 166	Scarlet R	Red 166	Disazo Cond.	●	medium
Scarlet GRN	Red 3	Scarlet GRN	Red 3	β-naphthol		medium
Red FGRD	Red 112	Red FGRD	Red 112	Naphthol AS		high
Red DP3G	Red 254	Red DP3G	Red 254	Diketopyrrolopyrrole	●	high
Red DP2G	Red 254	Red DP2G	Red 254	Diketopyrrolopyrrole	●	high
Red F2RA	Red 2	Red F2RA	Red 2	Naphthol AS		medium
Red F2RKD	Red 170	Red F2RKD	Red 170	Naphthol AS		high
Red F3RKD	Red 170	Red F3RKD	Red 170	Naphthol AS		high
Red F5RK	Red 170	Red F5RK	Red 170	Naphthol AS		low
Red 3RL	Red 48:3	Red 3RL	Red 48:3	BONA, Sr		medium
Red BRN	Red 214	Red BRN	Red 214	Disazo Cond.	●	medium
Red BR	Red 144	Red BR	Red 144	Disazo Cond.	●	medium
Red A2BN	Red 177	Red A2BN	Red 177	Anthraquinone	●	medium
Red A2B	Red 177	Red A2B	Red 177	Anthraquinone	●	low
Blue ASG	Blue 15:1	Blue ASG	Blue 15:1	Phthalocyanine		medium
Blue LBS	Blue 15:3	Blue LBS	Blue 15:3	Phthalocyanine		medium
Green BG	Green 7	Green BG	Green 7	Phthalocyanine		medium

Light		Weathering		Xylene	Acetone	Butylacetate	Ethanol	Water	HCl 2.5 %	NaOH 2.5 %
full shade	1/3	full shade	1/3							
7	6-7	4-5	4	2	2-3	2	3	5	5	5
7-8	7	4	3-4	5	3-4	4-5	5	5	5	5
7-8	7-8	5	4	4-5	4-5	5	5	5	5	3
7-8	7	4-5	4	5	5	5	5	5	5	5
7-8	7	4-5	4	4-5	4	4-5	5	5	5	5
7-8	7	4-5	4	4-5	4	4-5	4-5	5	5	5
7-8	7	4-5	4	4-5	4	4-5	5	5	5	5
7-8	7-8	5	4-5	5	4-5	5	4-5	5	5	5
6-7	5-6	4-5	2-3	3	3	3	4	5	5	5
7	6	4-5	4	2-3	2-3	2-3	3	5	5	5
7	6	4-5	4	3	3	3	4	5	5	5
7-8	7-8	4-5	4	5	5	5	5	5	5	5
7-8	7	4-5	4	4-5	4-5	4-5	4-5	5	5	3
7-8	7	4-5	4	5	5	5	5	5	5	3
6-7	6-7	4-5	4	4-5	3	3	5	5	5	5
7-8	7	4-5	4	5	4	4	4-5	5	5	5
7-8	7	4	3-4	4-5	4-5	4-5	4-5	5	5	5
6	3-4	2-3	2	2	2-3	2-3	3-4	5	5	5
7-8	7	4	3-4	4	3-4	4	4-5	5	5	5
6-7	6	3-4	3	4	4	4	4-5	5	5	5
7-8	7-8	4-5	4-5	5	4	4-5	4-5	5	5	5
7-8	7	4	3-4	4-5	5	4-5	5	5	5	5
7	4-5	4	2	3	2	2-3	2-3	4-5	5	5
7-8	6-7	4-5	3	2-3	3	3	3-4	5	5	5
7-8	7	4-5	4	5	4	5	5	5	5	5
7-8	7	4-5	4	4-5	3	4	4	5	5	5
6-7	4-5	3	2	2	2	2	2	5	5	5
7-8	7	4	3	4-5	4	4-5	4-5	5	5	5
7	5-6	4	2	4-5	4	4-5	4-5	5	5	5
6D	5	3D	2	4-5	3	4	4	5	5	5
6	4	3-4D	1-2	5	5	5	4-5	4-5	4	4
7-8	7-8	4D	3-4	4	4-5	4-5	5	5	5	5
7-8	7-8	4D	3-4	4-5	4-5	4-5	5	5	5	5
7-8	7	4	3	5	4	4-5	4-5	5	5	5
7-8	7	4	3	5	4	4-5	4-5	5	5	5
7-8	7-8	4-5	4-5	5	5	5	5	5	5	5
7-8	7-8	4-5	4-5	5	5	5	5	5	5	5
7-8	7-8	4-5	4-5	5	5	5	5	5	5	5

D - duller

Synthesis, a.s.

Synthesis is the largest Czech manufacturer of chemical specialities with more than 95 years' tradition. Synthesis respects the company objective to offer top products with high added value and specialized customer solutions, including not only production but also development activities and services. We are the leading Central European producer of organic pigments and dyes and the only producer of high performance pigments in Central Europe. Our company has experience in sales all over the world, especially in the most demanding markets in Western and Eastern Europe as well as the U.S.A.



VERSAL®

Due to the same chemical structure, identical or very close matching colour shade and other important properties a large number of pigments can be replaced by Versal pigments. The assortment VERSAL® is formed by various chemical types and can be used in wide range of application in such as coatings, printing inks, plastics, fibres, particularly if special technical properties are required. The most significant part of VERSAL® pigments (High-Performance Pigments) is above all a provision of very good fastness to light and weathering, heat resistance, fastness to solvents and chemicals and due to these excellent properties can be used in the most demanding applications.

In this pattern card VERSAL® pigments are illustrated and determined especially with respect for the paint industry. VERSAL® pigments are technically pure products distinguished by persistent colour qualities and controlled fastness properties. All VERSAL® pigments are suitable for mutual combination.

APPLICATION FASTNESS

Light fastness - Xenotest

- determined by ČSN EN ISO 105-B02: 2000 (80 0147) and evaluated in 1/3 and 1/1 of standard depth and in full shade; by it degree 1 denotes the lowest fastness and degree 8 the highest one.

Weathering fastness - Xenotest

- determined by ČSN EN ISO 105-B04: 1998 (80 0171) and evaluated in 1/3 and 1/1 of standard depth and in full shade; by it degree 1 denotes the lowest fastness, degree 5 the highest one.

Fastness to solvents

- colouring of solvent after 24 h at 20 °C according to ISO grey scale is determined; degree 1 denotes the lowest fastness, degree 5 the highest one.