

## Pigments for fresco painting, lime wash and gypsum

We have compiled this list for fresco painting, lime wash and for coloring plaster. Please note that if used in lime mortar, the pigments will be exposed a lot more to the alkalinity of the lime than in the thin layers of a lime wash or fresco painting. Therefore the pigments for lime mortars need to be more stable and we recommend to consult our cement list or to make tests to ensure the pigments are stable enough for this application. Please refer to the additional information regarding individual groups of pigments, such as synthetic-organic pigments, Ultramarines and others at the end of this document.

### Historical pigments from our own production

10000 – 10010 Smalt	11354 Slate Green from Mels <sup>3</sup>
10060 Egyptian Blue	11356 Gray from Mels <sup>3</sup>
10071 – 10072 HAN-Blue	11360 Brown-Red Slate
10074 – 10075 HAN-Purple	11362 Gray from Burgundy
10170 Ploss Blue <sup>1</sup>	11390 – 11392 Jade
10200 – Azurite <sup>1</sup>	11400 – 11401 Rock Crystal
10300 – 10310 Malachite <sup>1</sup>	11410 Eggshell White
104200 – 104201 Sodalite <sup>2</sup>	11415 – 11416 Bianco San Giovanni
10500 – 10580 Lapis Lazuli <sup>2</sup>	11420 – 11421 Fuchsite
11000 – 11010 Verona Green Earth	11520 Jarosite
11100 Bavarian Green Earth	11530 Gold Ochre
11110 – 11111 Russian Green Earth	11540 Taunus Ochre, light
11140 – 11141 Aegirine	11550 Snaefellsjökull Red
11150 – 11151 Epidote	11551 Heydalsvegur Yellow
11152 Florentine Green	11572 – 11577 Burgundy Ochre
11181 Andeer Green	11584 – 11585 Spanish Red Ochre
11200 Green Jasper	11620 Brown Earth from Otranto
11210 Green Quartz	11630 Iseo Brown
11250 Celadonite	116420 – 116441 Moroccan Ochres
11272 – 11280 Ochres from Andalusia	11670 Onyx Black
11282 Nero Bernino <sup>3</sup>	11674 Obsidian Black
11283 Alba Albula	11800 – 11810 Selenite, Marienglas
11290 – 11291 Sugar Dolomite	11830 Aragonite
11300 Red Jasper	12000 Ivory Black, genuine
11302 Opal Red	12010 Peach Black
11320 Rhodochrosite	12015 Grape Black
11350 Côte d'Azur Violet	12020 Cherry Black

### IWA-Enogu Pigments

1671508 – 1671514 Yellow Jasper Iwa-Oudo	1674508 – 1674514 Amazonite Hokusui-Matsu
1671608 – 1671614 Garnet Kicha Golden	1674908 – 1674914 Epidote
1672008 – 1672014 Garnet Sakura-Nezumi	1675308 – 1675311 Iron Oxide Orange
1673908 – 1673914 Sodalite Shiun-Matsu	1675408 – 1675414 Burnt Iron Oxide Red
1674408 – 1674414 Lizard-Stone	1675908 – 1675914 Tiger-Eye Tyoujicha

### Synthetic-organic pigments

23000	Phthalo Green Dark <sup>4</sup>	23350	Indian Yellow Imitation <sup>4</sup>
23010	Phthalo Green, yellowish <sup>4</sup>	23402	Quinacridone Pink D <sup>4</sup>
23050	Phthalo Blue, primary <sup>4</sup>	23451	Dioxazine Violet <sup>4</sup>
23060	Phthalo Blue, Royal Blue <sup>4</sup>	23493	Gubbio Red <sup>4</sup>
23070	Phthalo Blue, reddish <sup>4</sup>	23500	Maroon <sup>4</sup>
23080	Phthalo Blue, greenish <sup>4</sup>	23540	Quinophthalone Orange <sup>4</sup>
23100	Anthraquinone Blue <sup>4</sup>	23570	Pyranthrone Orange <sup>4</sup>
23178	Orange DPP-RA <sup>4</sup>	23585	Quinacridone Gold red-gold <sup>4</sup>
23179	Scarlet Red DPP-EK <sup>4</sup>	23600	Alizarine Crimson Light <sup>4</sup>
23180	Red DPP <sup>4</sup>	23610	Alizarine Crimson dark <sup>4</sup>
23182	Ruby DPP-TR <sup>4</sup>	23650	Brilliant Yellow <sup>4</sup>
23200	Scarlet Red <sup>4</sup>	23660	Isoindolinon Yellow <sup>4</sup>
23202	CPT-Scarlet Red <sup>4</sup>	23670	Isoindole Yellow-Orange <sup>4</sup>
23230	Permanent Red A <sup>4</sup>	23710	Quinacridone Violet <sup>4</sup>
23290	Permanent Red <sup>4</sup>	23720	Quinacridone Red Magenta <sup>4</sup>
23291	Permanent Red FRL <sup>4</sup>	23800	Isoindol Orange <sup>4</sup>
23293	CPT-Red <sup>4</sup>	23850	Studio Yellow <sup>4</sup>
23310	Permanent Yellow medium <sup>4</sup>	23950	Studio Red <sup>4</sup>
23330	Yellow, greenish <sup>4</sup>		

### Color Pastes

27000	Titanium White	28390	DPP Scarlet <sup>4</sup>
27400	Iron Oxide Brown 610	28470	DPP Red <sup>4</sup>
27500	Iron Oxide Black	28480	Graphol Red NFB <sup>4</sup>
27700	Ultramarine Blue <sup>2</sup>	28290	Permanent Red <sup>4</sup>
27800	Chrome Oxide Green	28500	Red <sup>4</sup>
28000	Lemon Yellow <sup>4</sup>	28510	Ruby DPP <sup>4</sup>
28020	Yellow, greenish <sup>4</sup>	28600	Quinacridone Red <sup>4</sup>
28050	Yellow <sup>4</sup>	28660	Quinacridone Violet <sup>4</sup>
28120	Permanent Yellow Medium <sup>4</sup>	28801	Dioxazine Violet <sup>4</sup>
28150	Isoindole Yellow <sup>4</sup>	28900	Phthalo Blue <sup>4</sup>
28200	Orange <sup>4</sup>	28910	Phthalo Royal Blue
28270	Pyranthrone Orange <sup>4</sup>	29000	Phthalo Green
28275	Orange DPP RA <sup>4</sup>	29050	Phthalo Green, yellowish

### Fine colored glass powders

- all suitable

### Earth Pigments

17000	Jarosite, from Cyprus	40510	Venetian Red
17020	Persian Yellow	40542	English Red Light
17050	Natural Sienna, Monte Amiata	40545	English Red Deep
17280	Persian Red	40610	Raw Umber
17400	Green Earth, from Cyprus	40611	Raw Umber, light
17410	Bluish Green Earth, from Cyprus	40612	Raw Umber, greenish
40010 – 40090	French Ochre	40623	Manganese Brown Intense
40195	Gold Ochre, from Poland	40630	Raw Umber, greenish dark
40200	Ochre Avana, greenish-yellow	40650	Chromite
40214	Gold Ochre DD	40660	Raw Umber, dark
40220	Italian Gold Ochre Light.	40700	Burnt Umber, reddish
40231	Brown Ochre light	40710	Burnt Umber, brownish
40241	Fawn Ochre	40720	Burnt Umber, dark brown
40260	Satin Ochre	40723	Burnt Umber, type B
40280	Amberg Yellow	40730	Burnt Umber Light, reddish-brown
40301	Iron Oxide Yellow	40800	Green Earth light
40310	Dark Ochre, German	40810	Bohemian Green Earth
40320	Dark Ochre, Italian	40821	Green Earth from Verona
40392	Raw Sienna, French	40830	Green Earth from France
40400	Raw Sienna, Italian	40850	Burnt Green Earth
40404	Raw Sienna, Badia, Italian	41550	Terra Pozzuoli
40410	Raw Sienna brownish	41600	Terra Ercolano
40430	Dark Burnt Sienna	41700	Verona Green Earth
40440	Pompeii Red	41800	Bohemian Green Earth, imitation
40470	Burnt Sienna, from France	41820	Verona Green Earth, imitation

### Yellow Pigments

43200	Nickel-Titanium Yellow	43340	Hokkaido-Orange
43210	Nickel-Titanium Yellow, greenish	43870	Yellow Zircon
43230	Praesodym Yellow	43880	Intensive Yellow
43300	Titanium Orange	43910 – 43920	Bismuth-Vanadate Yellow

### Green Pigments

44100	Cobalt Green	44190	Pastel Green, Victoria Green
44110	Cobalt Oxide Green Blue	44200	Chrome Oxide Green
44130	Cobalt Bottle Green	44280	Permanent Green

### Blue Pigments

45000	Ultramarine Blue, very dark <sup>2</sup>	45700	Cobalt Blue Dark
45010	Ultramarine Blue, dark <sup>2</sup>	45701	Cobalt Blue Dark, greenish
45020	Ultramarine Blue, reddish <sup>2</sup>	45702	Cobalt Blue, Sapporo
45030	Ultramarine Blue, greenish extra <sup>2</sup>	45710	Cobalt Blue Medium
45040	Ultramarine Blue, greenish light <sup>2</sup>	457141	Cobalt Blue Pale
45080	Ultramarine Blue, light <sup>2</sup>	45720	Cobalt Blue Light
45100	Ultramarine Violet, medium <sup>2</sup>	45730	Cobalt Cerulean Blue
45110	Ultramarine Violet, reddish <sup>2</sup>	45740	Cobalt Blue, greenish
45120	Ultramarine Violet, light reddish <sup>2</sup>	45750	Cobalt Blue Turquoise Light
45400	Zirconium Cerulean Blue	45760	Cobalt Blue Turquoise Dark

### White Pigments

46200	Titanium White Rutile	46360	Kremer White
46280	Buff Titanium	46400	Gofun Shirayuki
46300	Zinc White		

### Black Pigments

47000	Vine Black, German	47430	Spinel Black No. 43
47100	Bone Black	47501	Manganese Black
47200	Ivory Black JU	47510	Manganese Gray
47324	Basalt Black	47700	Graphite Powder Silver
47380	Spinel Black No. 38	47710	Graphite Powder Black
47400	Spinel Black	47800	Charcoal
47410	Spinel Gray	49700	Haematite-Chrome Oxide Spinel
47420	Spinel Black No. 42		

**Iron Oxide Pigments, natural/synthetic** - *all suitable*

**Translucent Iron Oxide Pigments** - *all suitable*

### Additional Information

<sup>1</sup> Copper pigments can change their color when exposed to lime for a longer time, therefore the paint should be used immediately; once the paint has dried, the pigments are relatively stable.

<sup>2</sup> Please note that Lapis lazuli, Sodalite and Ultramarine pigments are stable in lime only to a limited extent. These pigments can lose their color if exposed to the alkalinity of the lime for longer. Because of their sensitivity to acids these pigments are not recommended for exterior applications.

<sup>3</sup> Slate powders are not recommended for exterior applications. Slate minerals have a tendency to swell and shrink, changes in climate and humidity might cause cracks in the paint.

<sup>4</sup> Unlike mineral and inorganic pigments, organic pigments will not be properly incorporated into the mineral matrix of a lime based paint or plaster. As a result these pigments can get washed out if the paint is exposed to weathering. Therefore, these pigments are only recommended for indoors applications. Please also consider that these pigments need more binding medium than others!