Schmincke

MUSSINI®

Finest artists' resin-oil-colours
Series 10

The artists' natural resin-oil-colours
which are unique throughout the world

Based on old masters' formulations

101 colour tones offering the
ultimate in brilliance and purity

including 64 single-pigment colours

42 shades are exquisite translucent colours

Premium artists' pigments in the
highest concentrations

Maximum possible light-fastness

Balanced drying process

Tension-free and durable colour-layers

MUSSINI®, finest artists' resin-oil-colours from Schmincke,

are unique artists' colours produced by means of a particularly sophisticated manufacturing process to meet the very highest requirements. It goes without saying that they contain only the best traditional artists' pigments together with several outstanding newly developed artists' pigments, each in the highest possible concentrations and in pure form.
This results in artists' colours of the utmost brilliance and purity, which also mix more readily than premixed colour tones based on a limited selection of pigments.
Schmincke employs more than 250 different artists' pigments, almost 100 of which are contained in the MUSSINI® range.
The old masters of past centuries had to make do with a very limited range of good pigments. They would have been delighted at some of the many new artists' pigments which have now been developed, such as bismuth vanadate, spinel pigments, rutile pigments, diketo pyrrolo-pyrrole and perylene. They add particularly lightfast nuances to the professional spectrum available to today's artists.
Thanks to the particularly extensive range of glaze pigments, their fine processing and the specially adapted formulations, MUSSINI® provides for fine glaze colouring with outstanding brilliance, luminosity and light depth.

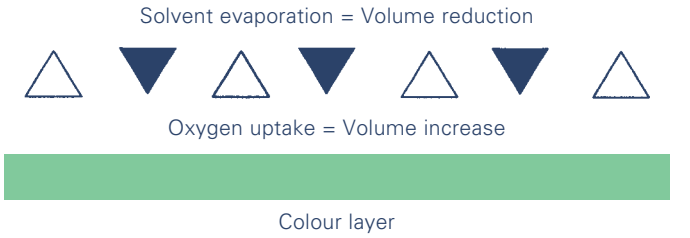
MUSSINI® – unique throughout the world!

The uniqueness of these finest professional artists' colours stems in particular from the adoption of the old masters' practice of combining selected artists' oil with natural resin. Masters back in the days of the late Middle Ages were already using indigenous European resins, such as mastic from the Greek island of Chios and copal. Natural resins were also used to enhance colour brilliance and the impression of depth in Byzantine art during the first centuries A.D. Throughout the long history of the development of oil colouring techniques a large number of very special binder formulations have been tested, and this fund of knowledge has been applied in evolving the MUSSINI® range.
On the basis of many years of scientific experience in the field of artists' colours, Schmincke continues to use a broad and diverse scope of artists' oils, which it combines with the most suitable natural dammar resin from Palembang, Indonesia.

Fig. Colour-charts from the 1930s

The amount of dammar resin which is added in colloidal solution depends on the oil requirements of the pigment concerned. The use of different variants of linseed oil purified by means of highly sophisticated processes also predominates in the MUSSINI® artists' resin-oil-colours.
However, other artists' oils, such as safflower oil, poppy-seed oil and sunflower oil, also possess properties beneficial to colouring applications which – when optimised with the requisite expertise – further enhance the formulations. So-called auxiliary agents and additives are also used, though in minimal and individually dosed amounts. These provide for the consistency and fineness which is required for colouring applications and ensure a harmonious drying process for the oil colours.
Pigment and a linseed oil are simply not sufficient to make a good artists' oil colour.
Schmincke's research efforts are always aimed at eliciting the full brilliant potential of the artists' pigments in all their individual variations while at the same time maintaining a harmonious overall range. This offers the artist absolute freedom to combine and mix the artists' colours of his choice.
What distinguishes the unique MUSSINI® natural resin-oil-colours from the best and finest "pure" (resin-free) artists' colours, such as NORMA® Professional or other comparable fine artists' oil colours?

Outstanding drying properties



MUSSINI® dries more evenly from inside, too, as a result of the largely self-compensating chemical and physical drying process: The increase in volume resulting from the chemical drying process which begins on the surface via oxygen uptake is largely compensated by the solvent content in the dammar solution which evaporates from inside.
The microscopic evaporation pores enable oxygen to penetrate more effectively into the inner layers, thus providing for more even drying of the surface and inner layers. This, in turn, reduces the danger of wrinkling and surface tension during the drying process. The dammar fractions which are finely incorporated in the colloidal solutions are enclosed by the drying artists' oils and enhance the brilliance of the colour layers.

Works by old masters which have been preserved in far better condition than many works by more recent Impressionist and Expressionist masters attest to the durability of such resin-oil artists' colours.

What makes MUSSINI® so unique?

Before the tube was invented, resin-oil-colours sank into obscurity because they did not lend themselves to transportation in leather and hide pouches. The founders of the Schmincke company, the chemists Hermann Schmincke and Josef Horadam were aware of the almost forgotten traditional resin-oil colour formulations when they decided in 1881 not only to import raw materials and manufacture pigments (in particular ultramarine) for colouring, but also to produce prime quality artists' colours. They found a guardian of the old masters' formulations in Professor Cesare Mussini, who only worked in a studio at the Academy of Florence.
Professor Mussini sold them the formulations, thereby enabling the company H. Schmincke & Co., established 1881, to quickly advance to the position of the leading German artists' colour manufacturer of the time.

MUSSINI® and Norma PROFESSIONAL

Before the turn of the century, when Josef Horadam obtained his European patents for **HORADAM**® finest artists' watercolours, Schmincke developed the standardised finest resin-free NORMA artists' oil colours from small special assortments for academy professors. Today, they represent a professional standard for finest artists' oil colours throughout the world – surpassed only by the unique MUSSINI® range.

Schmincke MUSSINI® symbols and testing

Colour Index and Pigment Names

The **C**olor **I**ndex system is an international standard to denominate dyes and pigments. In the C.I. a combination of letters and numbers indicate the colour category (C.I.-**Name**) i.e. PO 20 means Pigment Orange 20. This is followed by a 5-digit colour **number** which identifies the pigment for the chemist. We rather use instead of this number the clear chemical name of the pigment – i.e. instead of PO 20, 77203 we write PO 20 Cadmium Sulfoselenide.

The groups of Colour Index names are:

PW = Pigment white
PY = Pigment yellow
PO = Pigment orange
PR = Pigment red
PV = Pigment violet
PB = Pigment blue
PG = Pigment green
PBr = Pigment brown
PBk = Pigment black

Opacity and glazing properties

The opacity of a pigmented colour is not only depending on the thickness of the colour application but also on the distribution and size of the pigments as well as the height of the refractive index of the applied colour. All colours have been submitted to the same testing method: standardized application on black and white striped saturated base. This allows a classification with the 4 Schmincke squares, which are now also being used by some other producers:

☐ transparent
◩ semi-opaque
▧ semi-transparent
■ opaque.

Lightfastness

This describes the durability of a colour in daylight. The lightfastness therefore is not only referring to the pigment, but always to the total system – pigment, binding medium, additives. A number of influencing factors play a role too, likei ntensity of sunlight, temperature, moisture, oxygen or gas content of the air. The importance and combination of the various influencing factors vary depending on daytime and season as well as on geographic factors. We test our colours according to the German DIN Standard 16525. In connection with the textile industry we use as an objective scale the so called blue wool scale. This testing method consists of 8 wool stripes tinted with different lightfast dyes. The lightfastness is expressed in numbers. 1 means very low, 8 is the highest lightfastness according to the measurable changes of the 8 wool stripes in a given time. We translate those findings into our 5-star system. This allows a more precise differentiation especially in the more lightfast categories than with the usual 3 or 4 steps used by other producers.

Blue wool scale	Stars ★	
8	★★★★★	extremely lightfast
7	★★★★	good lightfastness
5 + 6	★★★	lightfast
4	★★	limited lightfastness
3	★	less lightfast
1 + 2	–	not lightfast

Lightfast colour systems require very long testing periods under natural light. For the testing of pigmented colour systems we therefore also use intensive exposure instruments to speed up this process. This does not only allow faster classification, but also permits to obtain reproducible results independent of location, climate and time. Such testing instruments contain Xenon light, which are adapted to daylight by using filters. Longterm exposure on the roof represents additional testing.

Schmincke MUSSINI® – finest artists' resin-oil-colours, series 10

This brochure has been printed in a 7-colour offset print – that means tones are only nearly identical with original colours.

Due to steady efforts for further improvements and changes in the raw material and pigment fields slight colour deviations are possible. Differences between documents and labels are possible according to differing printing dates.

① Price group

★★★★★ extremely lightfast
★★★★ good lightfastness
★★★ lightfast
★★ limited lightfastness
★ less lightfast
• 48 colour assortment

□ transparent
▨ semi-transparent
◩ semi-opaque
■ opaque

101 colours are available in tube 06 (15 ml) and tube 09 (35 ml),
3 whites also in tube 12 (120 ml).

No.	Name		Pigment(s)	C.I.-No.	Description
102	**Zinc white**	•	zinc oxide	PW 4	Pure white, semi-opaque in relation to titanium white and bluer. Ideal for lightening multicoloured shades.
②	★★★★★ ◩				
103	**Titanium opaque white**	•	titanium dioxide zinc oxide	PW 6 PW 4	Pure, brilliant white. Possesses the highest opacity and tinting power of all white colours.
①	★★★★★ ■				
105	**Translucent white**		zinc oxide titanium dioxide	PW 4 PW 6	Titanium white with ultrafine primary grain, providing a semi-transparent effect. Forms fine white haze effects which display a milky blue shimmer in glancing light. An ideal colour to create atmospheric perspectives.
⑤	★★★★★ ▨				
206	**Flesh tint**		zinc oxide hydrated iron oxide red iron oxide	PW 4 PY 42 PR 101	Warm, reddish flesh tone. Ideal base for mixing other flesh tones.
②	★★★★★ ◩				
787	**Brownish grey 1**		Zinc oxide titanium dioxide disazopigment ultramarine violet	PW 4 PW 6 PY 155 PV 15	Opaque grey with delicate red tinge, without black pigments.
②	★★★★ ■				
788	**Brownish grey 2**		Zinc oxide phthalocyanine green hydrated iron oxide zinc-iron-chromium	PW 4 PG 36 PY 42 PBr 33	Semi-opaque grey with green tinge, without black pigment.
②	★★★★★ ◩				
784	**Bluish grey 1**		Zinc oxide titanium dioxide hydrated iron oxide graphite	PW 4 PW 6 PY 42 PBk 10	Light stone grey, a "neutral" grey for the beholder.
②	★★★★★ ■				
785	**Bluish grey 2**		Zinc oxide titanium dioxide graphite	PW 4 PW 6 PBk 10	Opaque bluish grey, similar to slate grey.
②	★★★★★ ■				
790	**Shade grey**	•	Hydrated chromium oxide hydrated iron oxide black iron oxide zinc oxide	PG 18 PY 42 PBk 11 PW 4	Greenish, semi-transparent grey. Specially developed to produce the Italian masters' famous "sfumato" – a fine grey mist which was applied to portraits, for example, in order to lend them a softer look.
②	★★★★★ ▨				
792	**Dove grey**		Red iron oxide zinc oxide black iron oxide	PR 101 PW 4 PBk 11	Pleasant, warm dark grey with a "hint" of violet.
②	★★★★★ ■				
782	**Schmincke Payne's grey**	•	Ultramarine blue red iron oxide lamp black	PB 29 PR 101 PBk 7	Traditional Schmincke grey colour. Very similar to a dark neutral grey.
③	★★★★ ▨				
781	**Lamp black**	•	Lamp black	PBk 7	Particularly fine gas black with maximum depth of colour. This provides for high intensity and tinting power.
①	★★★★★ ■				
780	**Ivory black**		Carbonized bones of animals	PBk 9	Traditional deep black, opaque and light-fast. Formerly obtained from charred ivory pieces, now produced via the dry distillation of degreased bones.
①	★★★★★ ■				
783	**Mineral black**	•	Copper chromite (black spinel)	PBk 28	"Cool", inorganic black with a gentle tinge of charcoal. Produces a blue-tinged grey when mixed with white.
①	★★★★★ ■				
779	**Atrament black**	•	Perylene	PBk 31	Modern organic black pigment. Very deep in full tone, close to a Russian green in glazes. Produces green-tinged grey tones when mixed with white. Atrament was the name for a very cold black in Roman times.
②	★★★★ ▨				

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No.	Name		Pigment(s)	C.I.-No.	Description
236	**Translucent yellow oxide** ③ ★★★★★ □	•	Hydrated iron oxide	PY 42	Inorganic yellow which produces a very fine glaze effect; the tone is roughly similar to a brilliant yellow ochre or a very yellow Sienna.
232	**Naples yellow deep** ④ ★★★★★ ■		Chromium-antimony-titanium yellow	PBr 24	Warm, opaque, almost ochre-coloured yellow. Previously produced from toxic lead pigment, now an imitation with inorganic, highly light-fast pigments.
231	**Naples yellow light** ④ ★★★★★ ■		Chromium-antimony-titanium-yellow rutil-nickel-tin-titanium	PBr 24 PY 53	The lighter and yellow variant of dark Naples yellow.
224	**Brilliant yellow** ① ★★★★★ ◩		Zinc oxide chromium-antimony-titanium yellow rutil-nickel-tin-titanium	PW 4 PBr 24 PY 53	Traditional colour produced from inorganic pigments. Very light, almost beige yellow.
207	**Medieval yellow** ③ ★★★★★ ■	•	Zinc oxide titanium dioxide rutil-nickel-tin-titanium	PW 4 PW 6 PY 53	Pale, greenish, opaque yellow which imitates the original with inorganic pigments. Medieval yellow was the brightest yellow used by the Medieval painters.
208	**Yellowish green Ural** ④ ★★★★★ ■	•	rutil (Ni, Ti, Sb) spinel (Co, Zn)	PY 53 PG 19	Light, delicate greenish yellow which cannot be obtained by mixing, made from an inorganic pigment.
216	**Lemon yellow** ③ ★★★★ ◩	•	Mono-azo-yellow	PY 3	The classic brilliant, green-tinged yellow in oil colouring. Mixes well with glaze cyan; produces clear, semi-transparent green shades.
220	**Vanadium yellow light** ⑥ ★★★★★ ■		Bismuth vanadate pigment	PY 184	Contains a modern, opaque pigment with high tinting power. Produces a brilliant, slightly green-tinted yellow. A cadmium-free alternative to cadmium yellow. Mixes well with glaze cyan, produces clear, brilliant, opaque green shades.
227	**Cadmium yellow 1 light** ⑤ ★★★★★ ■		Cadmium-zinc-sulphide	PY 35	Brilliant opaque yellow with high tinting power.
209	**Cadmium yellow tone** ④ ★★★★★ ◩	•	Disazo-pigment	PY 155	Imitation of cadmium yellow with inorganic pigment. High tinting power, semi-opaque, cadmium-free.
221	**Vanadium yellow deep** ⑤ ★★★★★ ■		Bismuth vanadate pigment	PY 184	Contains a modern, opaque pigment with high tinting power. Produces a reddish, slightly dull yellow. A chrome-free alternative to medium chrome yellow.
228	**Cadmium yellow 2 middle** ⑤ ★★★★★ ■		Cadmium-zinc-sulphide	PY 35	Rich, red-tinted yellow with good opacity and tinting power.
238	**Translucent yellow** ③ ★★★★★ □	•	Azo-nickel-komplex	PY 150	Lemon yellow when applied in a thin layer to produce a fine glaze. Dark, almost ochre- coloured yellow when applied as an opaque layer.
223	**Indian yellow** ③ ★★★★★ ◪	•	Metal complex	PY 153	In former times, Indian yellow was produced in India from the urine of cows which were fed with mango leaves. This method of production is prohibited today, because it is cruel. Our Indian yellow is an imitation of the classic translucent orange-yellow colour.
229	**Cadmium yellow 3 deep** ⑤ ★★★★★ ■		Cadmium-sulpho-selenide	PO 20	Brilliant yellow-orange with high opacity and tinting power.
230	**Cadmium orange** ⑥ ★★★★★ ■		Cadmium-sulpho-selenide	PO 20	Brilliant orange with high opacity and tinting power.
243	**Chrome orange tone** ④ ★★★★★ ■		Pyrazolochinazolone	PO 67	Imitation of the toxic chrome orange with a non-toxic, modern, opaque organic pigment with high tinting power. A very deep, brilliantly fiery orange.
239	**Translucent orange** ③ ★★★★ □	•	Diketo-pyrrolo-pyrrole	PO 71	Finely translucent dark orange shade with pronounced red tinge. Ideal for mixing to produce very light red shades.

No.	Name		Pigment(s)	C.I.-No.	Description
340	**Brilliant scarlet** ④ ★★★★★ ▨	•	Disazo-condensation	PR 242	In former times, scarlet was a much sought-after colour which was obtained from a coccid which lives in the lermes oak. Today, the name „scarlet" is given to a brilliant red with a very pronounced yellow tinge.
356	**Cadmium red light** ⑥ ★★★★★ ■		Cadmium-sulpho-selenide	PR 108/ PW 21	Pure opaque red with high tinting power. Similar to vermilion red.
364	**Vermilion red tone** ③ ★★★★★ ■	•	Diketo-pyrrolo-pyrrole	PR 255	Classic red. As real cinnabar is toxic and possesses poor light-fastness, this colour has been imitated with a modern, organic pigment. Brilliant, opaque red, bluer than scarlet, yellower than carmine.
341	**Cadmium red middle** ⑦ ★★★★★ ■		Cadmium-sulpho-selenide	PR 108/ PW 21	Rich opaque red with high tinting power. Darker and bluer than light cadmium red.
342	**Cadmium red tone** ⑥ ★★★★★ ■		DPP Quinacridone	PR 242 PV 19	Imitation of medium cadmium red with organic pigments. High tinting power, opaque, cadmium-free.
357	**Cadmium red deep** ⑥ ★★★★★ ■		Cadmium-supho-selenide	PR 108 PW 21	Very deep red with a blue tinge. High opacity and tinting power.
343	**Madder root tone** ③ ★★★★★ □	•	Quinacridone	PR 206	Finely translucent dark, brownish red. Comparable with very red mahogany.
353	**Florentine red** ③ ★★★★★ □	•	Perylene	PR 179	Perylenes are among the most light-fast organic pigments. A translucent, cold, dark red with a slight brown tint. Florentine red is based on the old Florentine colour which was obtained from Brazil wood and was similar in colour.
365	**Translucent red oxide** ③ ★★★★★ □	•	Red iron oxide	PR 101	Warm, finely translucent reddish brown, commonly used today to imitate burnt Sienna.
344	**Madder lake brilliant** ④ ★★★★ ▨	•	Quinacridone	PR 209	Translucent, very bright deep red. With the exception of „Alizarin madder", our MUSSINI „madder" colours are standard tone designations. They are simulated today with highly light-fast, translucent, modern organic pigments.
347	**Alizarin madder lake** ④ ★★★ □		Anthrachinone, AL	PR 83:1	Cold, rich dark red, produces good glaze effects. Originally an alumina-based colour from alizarin, the main dyestuff contained in the madder plant. Since 1870, alizarin has been obtained and processed into colour by synthetic means.
346	**Madder lake dark** ④ ★★★★★ □		Diketo-pyrrolo-pyrrole	PR 254/ PV 42	Brilliant dark red with a blue tinge. Lighter than alizarin madder colour, produces a good glaze effect.
358	**Carmine** ④ ★★★★ ▨	•	Diketo-pyrrolo-pyrrole Quinacridone	PR 254/ PV 42/ PV 19	A standard tone designation, derived directly from the Latin name for the cocchineal louse. Brilliant red with blue tinge, semi-translucent.
363	**Translucent magenta** ④ ★★★★ □	•	Quinacridone rose	PR 122	Corresponds to the basic colour magenta in subtractive colour mixture, produces a very good glaze effect. Produces brilliant, translucent violet shades when mixed with glaze cyan.
366	**Caesar purple** ③ ★★★★★ □	•	Quinacridone	PV 19	Finely translucent colour, bluer than magenta. In ancient times, purple was obtained by means of a complicated process from the gland of a snail, and was much sought-after as a particularly valuable dye for artists' colours.
482	**Cobalt violet** ⑧ ★★★★★ ◩		Cobalt phosphate	PV 14	Very pure violet with a reddish tinge.
473	**Translucent violet** ③ ★★★★★ □	•	Dioxazine	PV 23	Very finely translucent, brilliant bluish violet with particularly high tinting power.

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No.	Name		Pigment(s)	C.I.-No.	Description
495	**Byzantine blue** ③ ★★★★★ ■	•	Indanthrone blue black iron oxide zinc oxide	PB 60 PBk 11 PW 4	Dark black blue which retains its blue character. Often appears in Byzantine frescos. In former times it was obtained primarily from azurite and a small fraction of coal. Composition of modern, light-fast pigments.
494	**Indigo tone** ① ★★★★★ ◩	•	Quinacridone indanthrone blue graphite	PV 19 PB 60 PBk 10	Imitation of indigo with very high tinting power and improved light-fastness. Also comparable to midnight blue on account of its depth of colour.
478	**Indigo** ② ★★★★ ■		Synthetical indigo	PB 66	Deep blue with very high tinting power. This colour used to be obtained from the indigo plant or woad; today, indigo is produced by synthetic means.
493	**Delft blue** ③ ★★★★★ □		Indanthrone blue	PB 60	Finely translucent dark blue shade with a red tinge.
492	**Ultramarine blue deep** ② ★★★★ □		Ultramarine blue	PB 29	Finely translucent, very pure blue with a red tinge. In the Middle Ages, ultramarine was obtained from the semi-precious stone lapis lazuli. Not until the first third of the 19th century was it possible to produce ultramarine by synthetic means.
491	**Ultramarine blue light** ② ★★★★ □	•	Ultramarine blue	PB 29	Lighter than dark ultramarine and with a slightly less pronounced red tinge.
481	**Cobalt blue deep** ⑥ ★★★★★ ◩		Cobalt-zinc-silicon oxide	PB 74	Semi-opaque blue with a subtle red tinge. Genuine cobalt blue was discovered in the 18th century, and was first used in colouring at the beginning of the 19th century. With cobalt blue, it was now possible to colour a radiant blue sky.
480	**Cobalt blue light** ⑤ ★★★★★ ◩		Cobalt aluminate blue spinel	PB 28	Semi-opaque, clear blue with a slight red tinge.
479	**Cobalt blue tone** ① ★★★★ ■	•	Ultramarine blue phthalocyanine blue zinc oxide	PB 29 PB 15:6 PW 4	Imitation of dark cobalt blue with ultramarine. Opaque, with high tinting power, slightly greener and duller.
496	**Translucent Oriental blue** ③ ★★★★★ □	•	Phthalocyanine blue	PB 15:6	Finely translucent, brilliant deep blue, the phthalocyanine pigment with the most pronounced red tint. These pigments were discovered in the 1920s and are now one of the most important and most stable organic pigments.
490	**Prussian/ Paris blue** ① ★★★★ ⧅	•	Iron-cyan-blue	PB 27	Traditional colour. Black blue with very high tinting power. Its real shade is only revealed in glazes. Has a tendency towards bronzing on account of its high pigmentation.
485	**Royal blue light** ② ★★★★ ■		Zinc oxide titanium dioxide cobalt-pigment-combination	PW 4 PW 6 PB 36	The classical royal blue was introduced under King Louis XIV of France, based on a cobalt pigment. The king's blue was light, corresponding roughly to a green-tinged sky blue, similar to our light royal blue.
486	**Royal blue deep** ④ ★★★ ■	•	Zinc oxide titanium dioxide ultramarine blue phthalocyanine blue	PW 4 PW 6 PB 29 PB 15:3	The possibility of producing ultramarine synthetically led to an increase in variations of the royal blue colour. Dark royal blue is a brilliant medium blue produced with ultramarine.
475	**Cobalt cerulean blue** ⑧ ★★★★ ◩		Cobalt-tin-oxide	PB 35	Semi-opaque cobalt blue shade with a greenish tendency.
477	**Translucent cyan** ③ ★★★★★ □	•	Phthalocyanine blue	PB 15:3	Corresponds to the basic colour cyan in the subtractive colour mixture; very good glaze effect. Produces brilliant, translucent violet shades when mixed with magenta and brilliant, semi-translucent green shades when mixed with lemon yellow.
487	**Manganese cerulean blue** ⑤ ★★★★ ⧅		Zinc oxide phthalocyanine blue	PW 4 PB 15:3 PB 16	Brilliant, semi-translucent blue with a turquoise tinge. An imitation of toxic manganese blue using the non-toxic organic phthalocyanine pigments.
497	**Translucent turquoise** ③ ★★★★★ □	•	Phthalocyanine blue	PB 16	Very finely translucent, brilliant turquoise blue; the phthalocyanine pigment with the most pronounced green tinge.
498	**Cobalt turquoise** ⑦ ★★★★★ ■		Cobalt-lithium-titanium-zinc oxide	PG 50	Opaque, highly light-fast turquoise with high tinting power and extreme brilliance of colour.

No.	Name	Pigment(s)	C.I.-No.	Description
511	**Chrome green tone deep** • ③ ★★★★★ ■	Cadmium-sulphoselenide cadmium-zinc-sulphide phthalocyanine blue	PO 20 PY 35 PW 21 PB 15:3	Opaque, deep and pure bluish green with very high tinting power. Formerly produced from chrome yellow and Berlin blue, now imitated with non-toxic pigments.
536	**Turmaline green** ⑤ ★★★★★ ■	Cobalt-chromium oxide-spinel	PG 26	Dark, rich bluish green, similar to the semi-precious stone tourmaline, whose shades range from yellowish green and olive green to bluish green.
512	**Chromium oxide green brilliant** ④ ★★★★★ ▨	Hydrated chromium oxide green	PG 18	Fiery, semi-translucent green with a blue tinge, also commonly referred to as emerald green. This colour has been available to artists since the mid-19th century, when it replaced the copper colours which were toxic at the time.
518	**Helio green deep** • ③ ★★★★★ □	Phthalocyanine green	PG 7	Finely translucent, brilliant, blue-tinged, rich green which cannot be produced by mixing.
521	**Helio green light** ③ ★★★★★ □	Phthalocyanine green	PG 36	Lighter variation with a more pronounced yellow tinge than dark helio translucent green.
535	**Oriental green** ⑥ ★★★★★ ■	Cobalt-titanium-nickel-zinc oxide	PG 19	Opaque pure medium green with high tinting power.
513	**Chromium oxide green deep** ③ ★★★★★ ■	Chromium oxide green	PG 17	Dull, olive-tinged, highly stable green, with high tinting power and opacity.
529	**Viridian** • ③ ★★★★★ ◩	Zinc oxide bismuth vanadate hydrated chromium oxide green	PW 4 PY 184 PG 18	Semi-translucent, gentle, yellow-tinged green, very similar to the „original" Schweinfurt green. Schweinfurt green was an important artists' colour in the 19th century, but was highly toxic on account of its arsenic content.
528	**Cobalt green opaque** ⑦ ★★★★★ ■	Bismuth vanadate cobalt-lithium-titanium	PY 184 PG 50	Brilliant light green with high opacity, produced from two „pure" pigments.
640	**Verona green earth** • ① ★★★★★ ▨	Hydrated chromium oxide green red iron oxide	PG 18 PR 101	Imitation of the prime Terra Verde earths from Baldo near Verona, which are no longer available. Ideal for producing the "Verdaccio" effect, the green priming coat applied to the main areas in portrait colouring.
526	**Sap green** • ② ★★★★★ □	Indanthrone blue azo-nickel-complex	PB 60 PY 150	Dark green with good glaze effect. Similar to Dutch pink, which was obtained from the unripe berries of the milkwort.
510	**Chrome green tone light** ③ ★★★★★ ■	Disazo-pigment chromium oxide green hydrated iron oxide	PY 155 PG 17 PY 42	Opaque, light and pure green with very high tinting power; lighter and markedly yellower variant of dark chrome green.
530	**Yellowish green** ② ★★★★ ■	Monoazoyellow phthalocyanine green hydrated iron oxide	PY 74 PG 7 PY 42	Light yellowish green with high opacity.
534	**Translucent golden green** • ③ ★★★★★ □	Metal complex phthalocyanine green	PY 129 PG 7	Golden-toned in glazes, like a light, yellowish sap green in full tone.
646	**Natural Bohemian green earth** ① ★★★★★ ▨	Earth pigment	PBr 7	Natural earth with a highly pronounced brown tinge, low tinting power. Results from the weathering of calcium-magnesium-iron silicates.

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No.	Name		Pigment(s)	C.I.-No.	Description
656	**Attish light ochre** ① ★★★★★ ▨	•	Hydrated iron oxide	PY 42	Imitation of the ochre which was much sought-after in ancient times, using modern ferrous oxides. Semi-opaque to semi-translucent. Fiery golden yellow in glazes.
660	**Raw Sienna** ① ★★★★★ ◩		Earth pigment Red iron oxide	PBr 7 PR 101	Semi-translucent to semi-opaque ochre yellow pigmented with a natural earth from Germany.
644	**Yellow Sienna** ② ★★★★★ ▨	•	Hydrated iron oxide Red iron oxide	PY 42 PR 101	Imitation of the particularly brilliant Sienna earths, which are virtually unobtainable today, with selected ferrous oxides.
653	**Deep ochre** ① ★★★★★ ■	•	Earth pigment	PY 42/ PY 43	Dark, warm, red-tinged ochre pigmented with a natural earth from Germany.
237	**Translucent orange oxide** ③ ★★★★★ □	•	Red iron oxide hydrated iron oxide	PR 101 PY 42	Warm, finely translucent brownish orange.
661	**Natural burnt Sienna** ① ★★★★★ ◩	•	Earth pigment	PBr 7	Dark reddish brown, semi-translucent to semi-opaque, pigmented with a burnt natural earth.
651	**English red** ① ★★★★★ ■		Red iron oxide	PR 101	Generic name for light iron oxide reds, brownish red with high opacity and tinting power.
663	**Pozzuoli earth** ① ★★★★★ ■		Red iron oxide	PR 101	Imitation of the famous natural earths from Italy, which are barely obtainable today. Its name relates to the place where it was formerly found at the foot of Vesuvius. Slightly lighter and yellower than Pompeiian red, with high opacity and tinting power.
647	**Pompeiian red** ① ★★★★★ ■	•	Red iron oxide	PR 101	This warm, brownish red was found on the mural colourings in Pompeii. It is darker than Terra Pozzuoli.
648	**Caput mortuum** ① ★★★★★ ■		Red iron oxide	PR 101	Violet-tinged dark reddish brown with high opacity and tinting power. Its name is derived from the field of alchemy and means "death's head", as this colour was obtained from iron salts which were baked down to their „dying" embers.
672	**Mineral brown** ③ ★★★★★ ■	•	Zinc-iron-chromium-brown	PBr 33	Opaque, pure dark brown with high opacity and tinting power, lighter and purer than a burnt umber.
662	**Brown pink** ③ ★★★★★ □		Metal complex red iron oxide hydrated iron oxide phthalocyanine green	PY 153 PR 101 PY 42 PG 7	Stil de grain was formerly obtained from the dyestuff contained in the semi-ripe berries of the milkwort – a warm translucent tone.
669	**Translucent brown oxide** ① ★★★★★ □		Brown iron oxide	PR 101	Dark, finely translucent reddish brown with high tinting power, more fiery than Vandyke brown.
670	**Raw umber light** ① ★★★★★ ▨	•	Earth pigment	PBr 7	Pigmented with a natural earth. Very fiery and yellow-tinged when used for glazing.
664	**Natural raw umber** ① ★★★★★ ◩		Earth pigment phthalocyanine green hydrated iron oxide	PBr 7 PG 7 PY 42	Mixture of natural earths and organic pigments. Semi-translucent, dark, olive-tinged brown.
666	**Natural burnt umber** ① ★★★★★ ■		Earth pigment	PBr 7	Pigmented with a natural earth. When burned, the umbers lose water of crystallisation and their grain size increases. This results in increased opacity and a shift in the shade towards a deep reddish brown with high tinting power.c
667	**Vandyke brown** ① ★★★★★ ▨		Perylene red iron oxide lamp black	PR 179 PR 101 PBk 7	Imitation of the colour which was formerly obtained from fine-washed brown coal, using highly stable pigments. The original colour was similarly unstable to asphalt. A translucent, deep blackish brown.
645	**Asphaltum black translucent** ① ★★★★★ □		Red iron oxide quinacridone lamp black	PR 101 PV 19 PBk 7	Highly stable pigments are used to imitate the asphalt colour which was widespread in the 19th century, a translucent, deep brown of low stability which was able to show through the colour layers.

Art.-No.	ml		
		1.	**Primer**
50 **500**	500		size
50 **502**	500/1000		primer
50 **504**	500/1000/4000		gesso

50 **500** 50 **502** 50 **504**

		2.	**Application**
		2.1	Mediums/additives
50 **038**	60/200/1000		MUSSINI medium 1 *for thinning*
50 **039**	60/200/1000		MUSSINI medium 2 *retards drying*
50 **040**	60/200/1000		MUSSINI medium 3 *accelerates drying*
50 **045**	60/200/1000		medium N *neutral drying, without oil of turpentine*
50 **022**	60		Siccative de Haarlem
50 **041**	60/200/1000		rapid medium *fast-drying*
50 **053**	60		transparent paint medium

50 **038** 50 **039** 50 **040** 50 **041** 50 **045** 50 **053**

50 **022**

50 **037**	35	transparent gel
50 **036**	35	drying accelerator
50 **034**	35/120	megilp *stabilizer of consistency*

50 **034** 50 **036** 50 **037**

		2.2	Binding mediums
50 **015**	60/200/1000		linseed oil, refined + bleached
50 **027**	60/200/1000		linseed oil, cold pressed
50 **014**	60/200		boiled linseed oil
50 **005**	60/200		stand linseed oil *slightly yellowing, slowly drying*
50 **016**	60/200		poppy oil bleached
50 **025**	60		sunflower oil *refined/winterized*

50 **005** 50 **014** 50 **015** 50 **016** 50 **025** 50 **027**

50 **073**	90	Venetian turpentine resin *viscous natural balsam*
50 **093**	100/1000	dammar in pieces
50 **094**	100	Chios mastic resin
50 **104**	100	cyclohexanone resin

50 **073** 50 **093** 50 **094** 50 **104**

3. Thinner and cleaning agents

50 **024**	60/200/1000	gum spirit of turpentine
50 **102**	60/200/1000	oil of turpentine, refined
50 **019**	60/200/1000	turpentine substitute
50 **023**	60/200/1000	terpin cleaner
50 **013**	60/200/1000	citrus-terpin
50 **051**	60/200/1000	brush cleaner
50 **026**	60/200/1000	Diluent N, thinner, odourless

4. Varnish

50 **020**	60/200/1000	alcoholic retouching varnish, glossy
50 **084**	60/200/1000	universal varnish RS, glossy
50 **083**	60/200/1000	picture varnish, glossy
50 **065**	60/200/1000	final varnish, glossy
50 **008**	60/200/1000	dammar varnish, glossy
50 **017**	60	mastic varnish, satin gloss
50 **044**	60/200/1000	neutral varnish
50 **064**	60/200/1000	mat varnish
50 **072**	35	wax varnish, mat satin gloss
50 **414**	300	AEROSPRAY picture varnish glossy
50 **416**	300	AEROSPRAY final varnish, glossy
50 **412**	300	AEROSPRAY glossy film
50 **408**	300	AEROSPRAY mat film

5. Specialities

50 **021**	60	siccative, dark
50 **018**	35	cleaner for oil paintings
50 **069**	60	Phöbus A, restoring medium
50 **060**	60/200	varnish remover
50 **003**	60	copaiba balsam

Empty sets are available as follows:

(A) *Art.-No. 71 954*
(B) *Art.-No. 71 915*
(C) *Art.-No. 71 912*

(A) **MUSSINI**® double wooden set with a 120 ml tube titanium white, 18 tubes of 15 ml and 17 tubes of 35 ml. Accessories consisting of: a double palette cup, palette knife, megilp medium, drying accelerator, transparent gel, **MUSSINI**® medium 1, Terpin cleaner, 3 brushes and drawing charcoal.
Colours:
15 ml 224, 232, 237, 239, 353, 363, 365, 479, 486, 494, 497, 510, 511, 534, 647, 653, 779, 780
35 ml 209, 216, 223, 243, 346, 364, 473, 487, 490, 491, 518, 526, 529, 640, 656, 661, 666
120 ml 103
Art.-No. 70 430

(B) **MUSSINI**® large wooden set with 15 tubes 35 ml and white (120 ml). Accessories consisting of: a double palette cup, palette knife, **MUSSINI**® Medium 1, Terpin cleaner, 3 brushes and drawing charcoal.
Colours:
35 ml 209, 216, 223, 346, 364, 473, 490, 491, 518, 526, 647, 656, 661, 666, 780
120 ml 103
Art.-No. 70 615

(C) **MUSSINI**® small wooden set with 12 tubes 15 ml and white (120 ml). Accessories consisting of a single palette cup, MUSSINI medium 1, 2 brushes and drawing charcoal.
Colours:
15 ml 216, 223, 346, 364, 490, 491 518, 526, 656, 661, 666, 780
120 ml 103
Art.-No. 70 212

(D) **MUSSINI**® wooden set "Test the best" – 3 tubes 15 ml-Tube: 238, 344, 477
Art.-No. 70 001

(E) **MUSSINI**® introductory set- 8 colours 15 ml: 103, 216, 363, 364, 477, 491, 518, 656
Art.-No. 70 008


(E)

We reserve the right to change the composition of sets.

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