

Schmincke

HORADAM[®] AQUARELL

Series 14

Finest artists' water-colours



- **110 Colours in large and small pans, in 5 ml- and 15 ml-tubes**
- **Each colour has its own individually optimized formula**
- **Pans poured 4 times in liquid state**
- **Highest light fastness despite of extra strict resistance validation**
- **Fully reusable paint when dried on a palette**
- **High control of paint flow, even on soft water-colour papers**
- **High quality standard "Made in Germany"**

Philosophy

The Schmincke founders motto

"MELIORA COGITO"

"I strive for the best" remains as it was in 1881, the year of the foundation. In 1893 Josef Horadam, one of the founders of H. Schmincke & Co., had set standards with the

HORADAM® finest artists water-colours for which he received

a European patent. The premium quality of HORADAM®AQUARELL colours has been already recognized in former times by famous artists like Nolde, Kokoschka and others, to be the very best.

Until today it is our goal to offer the very best artists' water-colours worldwide: premium quality made in Germany.



Josef Horadam, 1844–1917

The HORADAM®AQUARELL assortment

110 colours represent the HORADAM®AQUARELL range.

65 colours are formulated with one pigment only, the ideal concept for professional painting and for colour mixing. Many of the new artists' pigments have been researched and tested to comply with the highest quality standard regarding stability, fineness, resolubility and lightfastness. To achieve the outstanding characteristics, like reusable paint when dried on a palette and the high control of paint flow even on soft water-colour papers we only use the best raw materials. In its coloristic appearance the total assortment is particularly harmonious, balanced and complete.

No compromise in quality –

Highest standards of artists' pigments allow highest light fastness

The lightfastness is an objective characteristic, which depends not only on the pigment itself, but also on the complete formula. Therefore Schmincke does not only use the lightfastness given by the pigment itself but makes tests of the complete formula of each shade in the fast Xenontest and/or on the roof of the Schmincke factory for a prolonged period.

To be able to test properly and classify colours strictly according to our 5-star-system attached to the "woolscale", such intensive testing is absolutely vital.

It is self-understood that no water-colour painting should be exposed to direct sunlight for a longer time due to the usually fine and thin and thereby lightsensitive colour application.

Especially selected Gum Arabic

One main ingredient of the water-colour binding medium is Kordofan Gum Arabic from the southern Sahara region. Like most natural products this traditional water-colour binding medium differs from year to year. Therefore Schmincke is testing Gum Arabic every time before purchase and selects only the best crop of the respective year. This adds small but significant quality advantages. Other formula ingredients are selected equally carefully and of course are integrated in each formula in an individual optimised way to obtain a harmonious assortment, that can be easily picked up by the brush.



Advertisement from 1893

Oxgall – more than a wetting agent

An important criterion for the highest quality is the control of a water-colour application without undissolved pigment and undesired cloud formations. The perfect flow of the HORADAM®AQUARELL water-colour is guaranteed by the optimal amount of oxgall. It is the decision of the artist – not of the colour – where the application should flow moist in moist or if the colour should stay dry on the paper.

Pouring water-colours in liquid state, or how the real quality is born

Another traditional quality criterion is the re-usability of the HORADAM®AQUARELL water-colours while using the same formulation for tubes and pans. Both properties, the re-usability and the control of the paint flow can only be achieved by pouring water-colours into pans in a liquid state, which is really unique. This production process means, to fill the pans 4 times, allowing the colour to dry and settle between each filling.

The first step is to fill the pan with the colour and let it dry for some weeks in a drying chamber to a certain degree of residual moisture. The second, third and fourth step follows the same procedure. That means that each single pan is ready for sale only after 3 – 5 months.



Flüssiggießverfahren / Pouring water-colours in liquid state



To inform you in the best possible way about Schmincke HORADAM® artists' water-colours we use individual descriptions and also different symbols: (H). Some remarks in this framework: □ ▲

Color Index and Pigment names

The Color Index 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.

The groups of Color Index names are:
 PW= Pigment white PB = Pigment blue
 PY = Pigment yellow PG = Pigment green
 PO= Pigment orange PBr = Pigment brown
 PR = Pigment red PBk = Pigment black
 PV = Pigment violet

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 as well as on white 200 g water-colour paper. This allows a classification with the following 4 symbols:

□ 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, like intensity 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.

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.

Staining and Non-Staining

Water-colours applied to paper behave differently in respect to their adhesive power to the paper. Some colours may be washed off with a moist brush or cloth, others stick ("stain") more or less strongly to paper. To test the grade of staining identified with our 3 symbols below we have applied water-colour to 160 g paper and tried to rub it off after 24 hours of drying with a dry cloth after washing it with a wet brush. The result is classified in 3 categories:

△ non-staining
 ▲ semi-staining
 ▲ staining

HHHHH extremely lightfast
HHHH good lightfastness
HHH lightfast
HH limited lightfast
H less lightfast

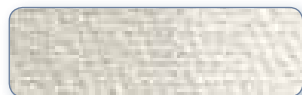
① Price group
1 Master assortment

transparent
 semi-transparent
 semi-opaque
 opaque

 non-staining
 semi-staining
 staining



| Colour | Pigment(e) No. Name | Pigment(s) | C.I.-No. | Description |
|--------|--|---|-----------------------------|--|
| | 101 Titanium 1 opaque white | <i>Titanium dioxide</i> | PW 6 | Brilliant, lightfast white with highest opacity and highest lightening power in mixtures. Rutil pigments are acid- and alkali-resistant. |
| | ① HHHHH <input type="checkbox"/> <input checked="" type="checkbox"/> | | | |
| | 102 Permanent 1 Chinese white | <i>Zinc oxide</i> | PW 4 | Cold, pure, lightfast traditional zinc white with good white lightening power; slightly cold bluish nuance. Reflects also invisible UV-rays by transforming them into visible rays. Due to transparency the best mixing white. |
| | ① HHHHH <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | | | |
| | 782 Neutral tint 1 | <i>Quinacridone magenta</i> <i>Indanthrone blue</i> <i>Lamp black</i> | PR 122 PB 60 PBk 7 | Traditional violet-grey. Mixture of red violet, blue and black. Recommended for first layers and deepening of green tones. |
| | ① HHH <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | | | |
| | 783 Schmincke payne's grey | Red iron oxide Ultramarine blue Lamp black | PR 101 PB 29 PBk 7 | Traditional Schmincke neutral grey. Mixture of red, blue and black. Slightly cooler than neutral tint. |
| | ① HHHH <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | | | |
| | 787 Payne's grey 1 bluish | Lamp black Phthalocyanineblue Phthalocyanineblue | PBk 6 PB 15:6 PB 15:2 | Internationally requested bluish variation of Schmincke Payne's grey. |
| | ① HHHH <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | | | |
| | 785 Neutral grey | Diketo-Pyrrolo-Pyrrol Indanthrone blue Benzimidazolone | PR 255 PB 60 PO 62 | Neutral grey tone from complementary colours without black content. Remains colour-neutral even after mixing with white. |
| | ③ HHHH <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | | | |
| | 786 Charcoal grey | Lamp black | PBk 7 | Brownish greyblack, pigmented with lamp black. Residues of incomplete combustion of organic substances like gas or oil. Consisting of pure carbon. |
| | ① HHHH <input type="checkbox"/> <input checked="" type="checkbox"/> | | | |
| | 781 Lamp black | Lamp black | PBk 6 | Greyish black. Residues of incomplete combustion of organic substances like gas or oil. Consisting of pure carbon. Recommended for first layers. |
| | ① HHHH <input type="checkbox"/> <input checked="" type="checkbox"/> | | | |
| | 780 Ivory black 1 | Carbonized bones of animals | PBk 9 | Very deep black. Formerly made from carbonized ivory, nowadays produced by dry distillation of degreased bones. Small quantities of calcium-phosphate add slightly grey-bluish tone. Often used for dark tones and colour turbidity. |
| | ① HHHHH <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | | | |



894 **Silver**
1

Iriodin rutil silver

No bronze, but coated mica with metal oxide (Iriodin).

② HHHHH



893 **Gold**
1 **Gold**

Iriodin goldpearl

Yellow gold tone. No bronze, but coated mica with metal oxide (Iriodin).

② HHHH



930 **Brilliant purple** Triarylcarbonium

PR 81:2 Specially pure and brilliant, cannot be mixed. Equivalent to purple red of the printcolour-scale according to DIN 16508 and DIN 16509. Without evaluation of lightfastness.

②



940 **Brilliant red violet**

Triarylcarbonium

PV 1 Specially pure and brilliant, cannot be mixed. Recommended for graphic and textile design. Without evaluation of lightfastness.

②



910 **Brilliant blue violet**

Triarylcarbonium

PV 3 Specially pure and brilliant, cannot be mixed. Recommended for graphic and textile design. Without evaluation of lightfastness.

②



206 **Titanium yellow** Rutil-nickel-titanium

PY 53 Semi-opaque light yellow. Acid- and alkali-resistant. Cool yellow for soft, thin colour layers.

③ HHHH



215 **Lemon yellow** 1 Monoazoyellow

PY 3 Greenish yellow. Heavy metal-free alternative to cadmium yellow lemon. Good painting and mixing properties. Mixed with phthalogreen results in brilliant tones. Basic yellow for individual mixtures.

① HHH



211 **Chrome yellow lemon, no lead** Benzimidazolone

PY 175 Highly transparent lemon yellow tone. Heavy metal-free alternative to the original toxic chromium yellow lemon, which is not used anymore.

② HHH



223 **Cadmium yellow lemon** Cadmium-zinc-sulphide

PY 35 Traditional tone. Cool lemon-cadmium-pigment. Alkali-resistant. Recommended for mixtures of yellow-greenish and green tones.

③ HHHH



207 **Vanadium yellow** Bismutvanadat

PY 184 Highly opaque, slightly greenish, cool yellow with modern, non-toxic, pure, durable and colour-intensive pigment. Non-polluting alternative to cadmium yellow lemon. Creates brilliant mixtures.

④ HHHH



224 **Cadmium yellow light** 1 Cadmium-zinc-sulphide

PY 35 Strong, brilliant yellow with opacifying character. In the colour-theory often used as basic yellow (Y).

③ HHHH



208 **Aureolin modern** Benzimidazolone

PY 151 Pure yellow. Non-polluting alternative to aureolin cobalt yellow based on a modern, organic pigment.

③ HHHH



216 Pure yellow Benzimidazolone PY 154 Brilliant yellow with modern, organic pigment. Heavy metal-free alternative to cadmium yellow. In thick layers semi-opaque, in thin layers transparent. Good lightfastness and intermiscibility with other tones.

② HHHH □ ▲



209 Translucent 1 yellow Azo-nickel complex PY 150 Slightly transparent pure yellow or lemon yellow tone, when applied in thin layers. In thick layers tendency to ochre.

② HHHH □ ▲



210 Gamboge gum modern Nickel complex PY 150 Yellow tone, similar to the former natural, less lightfast and toxic
Anthrapyrimidin PY 153 gamboge gum, but now non-toxic, non-polluting with good lightfast-
PY 108 ness.

④ HHHH □ ▲



212 Chrome yellow light, no lead Metal complex PY 153 Highly transparent light yellow tone. Mixture of two modern,
Disazopigment PY 155 organic pigments. Non-polluting alternative to the original toxic chromium yellow.

② HHH □ ▲



225 Cadmium yellow middle Cadmium-zinc-sulphide PY 35 Highly brilliant, strong yellow tone with opacifying character.

③ HHHH ■ ▲



220 Indian yellow 1 Isoindolinone PY 110 Modern replacement of former animal metabolism product from
Benzimidazolone PY 154 India, which was prohibited long ago. Classic, very transparent, mix of two pigments.

② HHHH □ ▲



226 Cadmium yellow deep Cadmium-zinc-sulphide PY 35 Brilliant cadmium yellow tone with opacifying character.
Cadmium-sulphoselenide PO 20

③ HHHH □ ▲



213 Chrome yellow 1 deep, no lead Monoazo yellow PY 65 Reddish yellow. Non-polluting alternative to the original used toxic chromium yellow deep. Tendency to orange.

② HHH □ ▲



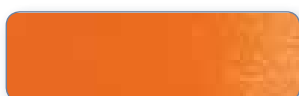
227 Cadmium orange light Cadmium-sulphoselenide PO 20 Strong and brilliant. Good mixing property.

③ HHHH ■ ▲



214 Chrome orange, 1 no lead Benzimidazolone PO 62 Non-polluting alternative to the original toxic chromium orange by using a lightfast, non-toxic, organic pigment.

② HHHH □ ▲



228 Cadmium orange deep Cadmium-sulphoselenide PO 20 Brilliant, strong orange tone. Opacifying character. Good results mixed with other tones.

③ HHHH □ ▲



218 Translucent 1 orange Diketo-Pyrrolo-Pyrrol PO 71 Brilliant orange-red. New developed organic lightfast pigment. Mixed with phthalogreen soft, neutral grey tones are achieved. The intensive reddish character is ideal for mixtures of very light red tones.

② HHH □ ▲



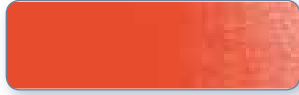
361 Permanent red Disazo condensation PR 242 Cadmium-free alternative to cadmium red.
Benzimidazolone PO 62

③ HHHH ▲



348 Cadmium red orange Cadmium-sulphoselenide PO 20 Brilliant tone with opacifying character. To be used as lightest red.

③ HHHH ▲



365 Vermilion Diketo-Pyrrolo-Pyrrol PR 255 Metal-free alternative to the traditional vermilion. New developed organic pigment with good lightfastness and opacifying character.

③ HHHH ▲



360 Permanent red orange Benzimidazolone PO 62 Cadmium-free alternative to cadmium red orange, tone 348, with
Disazo condensation PR 242 lightfast organic pigments.

③ HHHH ▲



349 Cadmium red 1 light Cadmium-sulphoselenide PR 108 Warm, brilliant red tone.

③ HHHH ▲



347 Cadmium red middle Cadmium-sulphoselenide PR 108 Expanding range of cadmium red tones. Medium red tone with opacifying character.

③ HHHH ▲



363 Scarlet red 1 Diketo-Pyrrolo-Pyrrol PR 254 Scarlet used to be a popular dyestuff (crimson or Cochenille). Nowadays an organic pigmented colour with good lightfastness and opacifying character.

③ HHHH ▲



366 Deep red 1 Perylen PR 179 Cadmium-free alternative to cadmium red deep, tone 350. Lightfast, organic pigment with perfect solvent-stability and high chemical resistance. High tinting strength.

③ HHHH ▲



350 Cadmium red deep Cadmium-sulphoselenide PR 108 Deep red with slight brownish tendency. Opacifying character.

③ HHHH ▲



345 Dark red Naphtol AS PR 170 Strong, bluish red.

② HH ▲



357 Alizarin-crimson Anthrachinone, AI PR 83:1 Cool, saturated deep red, good transparency. Originally an alumina pigment lake of alizarine, the main dyestuff of the former important madder plant. Synthetic production of alizarin since 1870.

① H ▲



358 Madder lake deep Anthrachinone, AI PR 83:1 The lightfastness of the traditional alizarin-tone has been improved
Anthrachinone PR 177 by an anthrachinone pigment. The tone is now deeper.

② HH ▲



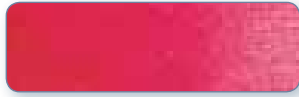
354 Madder red 1 dark Quinacridone Perylen PV 19 Cool, saturated deep red with good transparency. Alternative to PR 179 madder lake deep, tone 358, with better lightfastness.

③ HHHH ☐ ▲



356 Rose madder Anthrachinone, AI BONS, Mn PR 83:1 Traditional colour. Soft pink tone, mixed from two pigments. PR 48:4 The manganesian lake pigment creates bluish red tones. Light- and weather resistance of full tones are relatively good.

① HH ☐ ▲



351 Ruby red Quinacridone red PV 19 Transparent, red-bluish tone. Modern, lightfast, organic pigment. Different colour layers have strong influence on the character from red to deep red.

③ HHHH ☐ ▲



353 Permanent 1 carmine Quinacridone red PV 19 Originally obtained from real Cochenille-louses. Modern pigment allows today lightfast alternative.

③ HHHH ☐ ▲



352 Magenta 1 Quinacridone violet PV 42 Basic colour magenta (M) in colour-theory.

③ HHH ☐ ▲



367 Purple Magenta Quinacridone magenta PR 122 Original dyestuff replaced by organic quinacridone pigment. Bluish alternative to basic colour 352, magenta.

③ HHH ☐ ▲



368 Quinacridone violet Quinacridone violet PV 19 Red-violet tone produced from one organic pigment.

② HHH ☐ ▲



474 Manganese 1 violet Manganese-ammoniumphosphate PV 16 Lightfast, soft, brilliant red violet tone. Manganeseammonium phosphate is similar extracted like in the 18th century from manganese dioxide minerals and phosphoric acid in connection with ammonia. In 1900 firstly used by the artists colours manufacturers.

③ HHHH ☐ ▲



476 Mauve Dioxazine PV 23 Traditional colour with carbozole-violet pigment. Universal use. Bluish violet, cannot be mixed from other pigments.

② HH ☐ ▲



495 Ultramarine 1 violet Ultramarine violet Ultramarine blue PV 15 PB 29 Blue violet tone, cannot be achieved by any other colour. Good lightfastness like all other ultramarine pigments, little tinting strength, coarse-grained.

② HHHH ☐ ▲



482 Delft blue 1 Indanthrone blue PB 60 Strong blue. High tinting strength. Modern, lightfast organic pigment. Warm, deep blue tone with high depth effect.

③ HHHH ☐ ▲



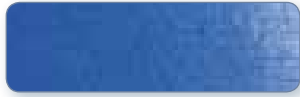
498 Dark blue indigo Indanthrone blue PB 60 Lightfast, slightly w ment.

③ HHH ☐ ▲



485 Indigo 1 Phthalocyanine blue PB 15:1 Originally traditional plant dyestuff from India. For lightfastness reasons replaced by synthetic, organic pigments. Perfect for shading and deepening of coloured tones.
Indigo synthetic PB 66

② HH □ ▲



488 Cobalt blue deep Cobalt-zinc-siliciumoxide PB 74 Very lightfast, deep blue, more reddish than tone 487, cobalt blue light. Coarse-grained. Tone and chemistry very similar to smalts blue of the late middle age. Often used to paint sky and horizon.
Spinel (Co, Al) PB 28

④ HHHHH □ ▲



494 Ultramarine 1 finest Ultramarine blue PB 29 Ultramarine has been extracted in the middle age from the semi-precious stone Lapislazuli. Artificial production of equal standard since 1830. Also used as basic colour for violet tones.

② HHHH □ ▲



486 Cobalt blue tone Zinc oxide PW 4 PB Metalfree alternative to cobalt blue. Semi-transparent tone due to Ultramarine blue 29 zinc white content.

① HHHH □ ▲



487 Cobalt blue light Cobalt-aluminium-oxide PB 28 Clear blue. Pure valuable cobalt pigment discovered end of the 18th century. Best suited for landscape and blue sky painting.

④ HHHHH □ ▲



496 Ultramarine blue Phthalocyanine blue PB 15 Strong, saturated blue. Two pigment mix. Slightly dimmer than tone Ultramarine blue PB 29 494, ultramarine finest.

② HHHH □ ▲



480 Mountain blue 1 Zinc sulphide/Barium sulfate PW 5 Traditional tone. The pigments mixed with white result in a lightfast light blue. Ideal for neutral, soft blue tones.
Ultramarine blue PB 29
Phthalocyanine green PG 7

① HHHH □ ▲



478 Helio blue reddish Phthalocyanine blue PB 15:6 Specially modified phthalocyanine pigment. Thick colour layers Phthalocyanine blue PB 15:2 result in an untypical warm phthalo blue tone.

② HHHH □ ▲



492 Prussian blue 1 Iron cyan blue PB 27 Traditional tone with high lightfastness.

① HHHH ■ ▲



491 Paris blue Phthalocyanine blue PB 15 Traditional deep blue. High tinting strength and good lightfastness.
Phthalocyanine blue PB 15:1 Tone is achieved by mixture of 3 pigments. Slightly more greenish Iron cyan blue PB 27 than tone 492, Prussian blue.

② HHHH ■ ▲



484 Phthalo blue 1 Phthalocyanine blue PB 15:1 Traditional deep greenish blue tone. High tinting strength. Mixed with yellow very brilliant green tones are achieved.

① HHHH □ ▲



479 Helio cerulean Phthalocyanine blue PB 15:3 Cerulean blue based on phthalocyanine. Pigment specially treated to be used for water-colours. Basic blue tone for mixtures. Close to cyan tone (C).

① HHHH □ ▲



481 Cerulean 1 blue tone Zinc oxide PW 4 Cobalt-free cerulean blue. The zinc oxide preserves the character of the colour. Similar to basic colour (C) of colour-theory. Similar to helio cerulean.
Phthalocyanine blue PB 15:3

① HHHH ☐ ▲



499 Cobalt cerulean Cobalt pigment combination PB 36 Cobalt blue tone with greenish tendency. Cobalt cerulean pigments are known since the beginning of the 19th century. Fastness properties same as cobalt blue.

④ HHHHH ☑ ▲



475 Helio turquoise 1 Phthalocyanine blue PB 16 Greenish blue. Metal-free phthalocyanine blue pigment.

① HHH ☐ ▲



509 Cobalt turquoise 1 Cobalt-lithium-titanium-zinc oxide PG 50 Very lightfast turquoise, opacifying character. Very brilliant.

④ HHHHH ☑ ▲



510 Cobalt green turquoise Cobalt pigment combination PB 36 More greenish than tone 499, cobalt cerulean with equally high lightfastness.

④ HHHHH ☐ ▲



528 Prussian green 1 Phthalocyanine green PG 7 Indanthrone blue PB 60 Originally mixed colour from Prussian blue and not lightfast yellow lake. Nowadays mixture of two lightfast pigments. Well suited for bluish shadings in landscape painting.

② HHHH ☑ ▲



519 Phthalo green 1 Phthalocyanine green PG 7 Extremely brilliant transparent green. Alternative to Chromium oxide green brilliant, shade 511. Well suited for mixtures with yellow and red tones. Recommended for landscape painting.

① HHHH ☐ ▲



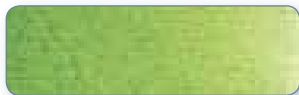
511 Chromium oxide green brilliant Hydrat chromium oxide PG 18 Phthalocyanine green PG 7 Highly transparent, cool, very lightfast standard tone. In the middle of the 19th century this tone replaced the former toxic copper colours. Well suited for mixture of brilliant green tones with yellow parts.

② HH HH ☐ ▲



514 Helio green Bromide Phthalocyanine green PG 36 Transparent, brilliant green. Tone achieved by substitution of chlorine with bromide in the pigment molecule. Supplement to the organic pigmented green series. Warmer than tone 519, phthalo green.

② HHHH ☐ ▲



530 Sap green Metal complex Phthalocyanine green PG 7 PY 153 Highly transparent green. Very famous in the 18th and 19th century, made from berry juice. At that time extremely sensitive to light. Today alternative organic pigment mixture.

② HHH ☐ ▲



526 Permanent green Disazopigment Phthalocyanine green PG 7 PY 155 Brilliant yellow-green tone. Mixed colour of two lightfast pigments. Slightly more neutral than 524, may green.

② HHHH ☐ ▲



524 May green 1 Benzimidazolone Phthalocyanine green PG 7 PY 151 Traditional brilliant yellow-green tone. Contains 2 transparent, lightfast pigments. Recommended for landscape painting.

② HHHH ☐ ▲



521 Hooker's green Phthalocyanine PB 15:3 Since mid of the 18th century a mixture of gamboge gum, Prussian blue and partly indigo was used for water-colour painting. Today the tone is achieved by lightfast pigments.
Phthalocyanine green PG 7
Hydrated iron oxide PY 42

① HHHH □ ▲



533 Cobalt green 1 dark Cobalt-chromium-oxide-spinel PG 26 Deep, dull, opaque cobalt green tone. Very lightfast.

④ HHHHH □ ▲



534 Permanent 1 green olive Benzimidazolone PO 62 Lightfast alternative to tone 515, olive green. Mixture of 2 lightfast pigments.
Phthalocyanine green PG 7

② HHHH ■ ▲



515 Olive green Phthalocyanine blue PB15 Metal complex PG 8 Neutral olive green tone with excellent mixing properties. Important basic tone for green nuances in landscape painting.

① HH ■ ▲



535 Cobalt green pure Cobalt-titanium-nickel-zinc oxide PG 19 The pigment is a "spinel" combination of cobalt-aluminium titanium-nickel-zinc oxide. Excellent lightfastness.

④ HHHHH □ ▲



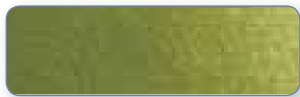
512 Chromium oxide green Chromium oxide green PG 17 Dull green tone. Gained from glowing potassium-bichromate in connection with reduced substances. Contains the most stable green pigment. Opacifying character and perfect tinting strength. Recommended for landscape painting.

② HHHHH □ ▲



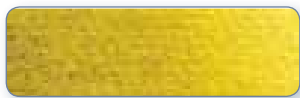
516 Green Earth Earth pigment PBr 7 Contains pure natural earth. Extracted from efflorescenced calcium-magnesium-iron silicates. Not very colourful, but perfect transparent. Recommended for toning down flesh tints in the portrait- and nude painting.
Phthalocyanine green PG 7

① HHHH ■ ▲



525 Olive green 1 yellowish Benzimidazolone PO 62 Traditional green. Contains 2 lightfast pigments. Recommended for landscape painting.
Phthalocyanine green PG 36

② HHHH ■ ▲



536 Green yellow Azo-nickel complex PY 150 Transparent greenish-yellow tone. Organic pigment.
Lamp black PBk 7

② HHHH ■ ▲



221 Jaune brilliant 1 dark Titanium dioxide PW 6 Rutil-nickel-tin-titanium Chromium-antimony-titanium-yellow PY 53 PBr 24 Traditional tone from anorganic pigments. Often used for portrait and nude painting.

② HHHH □ ▲



229 Naples yellow 1 Titanium dioxide PW 6 Rutil-nickel-tin-titanium Chromium-antimony-titanium-yellow PY 53 PBr 24 Imitation with anorganic pigments of the originally toxic lead pigment. The white contents creates opacifying character.

② HHHH □ ▲



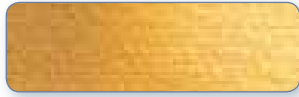
656 Yellow raw ochre Hydrated iron oxide PY 42 Earth pigment PY 43 Brilliant yellow ochre from natural earth pigment. Light transparent. Very good lightfastness. Recommended for landscape painting.

① HHHHH ■ ▲



667 Raw umber Earth pigment PBr 7 Light brown transparent tone. Contains exclusively pure natural earth. Basic colour for landscape painting.

① HHHHH ▲



655 Yellow ochre 1 Hydrated iron oxide PY 42 Brilliant yellow ochre. Synthetic hydrated iron oxide with opacifying character. Very lightfast. Recommended for landscape painting.

① HHHHH ▲



659 Titanium gold ochre Chromium-antimony-titanium-yellow PBr 24 Modern, anorganic, opaque pigment. Slightly warmer than tone 655, yellow ochre and 656, yellow raw ochre.

② HHHH ▲



660 Raw Sienna Earth pigment PBr 7/ PY 43 Pure natural earth. Traditionally from Italy. Very lightfast.

① HHHHH ▲



230 Naples yellow 1 reddish Titanium dioxide Zinc oxide Azocondensation Hydrated iron oxide PW 6 PW 4 PR 242 PY 42 Traditional tone, opacity effected by white content. Untoxic alternative mixed from 4 pigments, to achieve the traditional reddish-yellow tone. Recommended for portrait- and nude painting.

② HHHH ▲



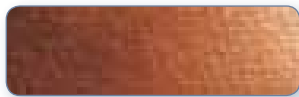
654 Gold brown Monoazoyellow Azocondensation PY 65 PBr 41 Warm reddish-yellow brown from 2 modern, organic pigments.

② HHH ▲



661 Burnt Sienna 1 Red iron oxide Carb. bones of anim. PR 101 PBk 9 Traditional earth tone. Recommended for landscape painting.

① HHHHH ▲



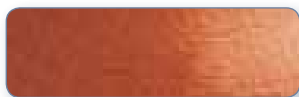
648 Translucent brown Azocondensation PBr 41 Modern brown, transparent when applied in thin layers. Organic pigment, developed only a few years ago. Reddish alternative to burnt Sienna.

② HHHH ▲



670 Madder brown 1 Quinacridone PR 206 Lightfast alternative to the former madder brown. Modern, organic pigment. Recommended for portrait- and nude painting.

② HHHH ▲



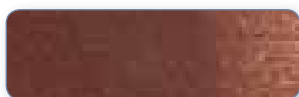
649 English Venetian red 1 red Red iron oxide PR 101 Orange coloured brown red. Very colour-intense, opaque pigment; a synthetic red iron oxide. Very good lightfastness.

① HHHHH ▲



666 Pozzuoli earth Red iron oxide Quinacridone PR 101 PR 206 Imitated earth colour. The name comes from the former place of discovery near the Vesuv in Italy. Recommended for portrait- and nude painting.

① HHHHH ▲



645 Indian red 1 Red iron oxide Quinacridone PR 101 PR 206 Violet, deep red-brown. Synthetic pigments create high tinting strength and opacity. Recommended for landscape painting and portrait.

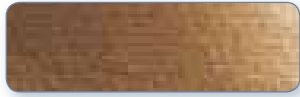
① HHHHH ▲



669 Vandyke brown Metal complex
Earth pigment
Lamp black

PY 153 Greenish alternative to sepia brown. Used since the 17th century.
PBr 7 Originally extracted from finely elutriated lignite, but too uncertain,
PBk 7 therefore replaced by a lightfast pigment mixture.

① HHHH ▲



668 Burnt umber Earth pigment
1

PBr 7 Warm brown. Contains only pure, burnt natural earth.
Basic colour for landscape painting.

① HHHHH ▲



663 Sepia brown Phthalocyanine blue
1 Earth pigment
Carb. bones of anim.

PB15:1 Originally – since the end of the 18th century – gained from the cuttlefish.
PBr 7 At that time not lightfast and storable. Replaced by lightfast pigment
PBk 9 mixture. Often used for first layers.

① HHHH ▲



662 Sepia brown Disazocondensation
tone Earth pigment
Carb. bones of anim.

PR 166 Reddish. Sepia brown from animals formerly adjusted with madder
PBr 7 lake. Today synthetic production with lightfast pigments.
PBk 9

① HHHH ▲



652 Walnut brown Zinc-iron-chromium-
spinel

PBr 33 Deep brown. Modern, anorganic "spinel"-pigment. Very good
lightfastness. Coarse-grained. Due to pigment property opaque,
applied in thick layers very opaque.

② HHHHH ▲

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 field slight colour deviations are possible. Differences in wording are possible between printed colour charts and labels according to differing printing dates.

The colour concept

Schmincke

The colour concept of Schmincke HORADAM® water-colour boxes

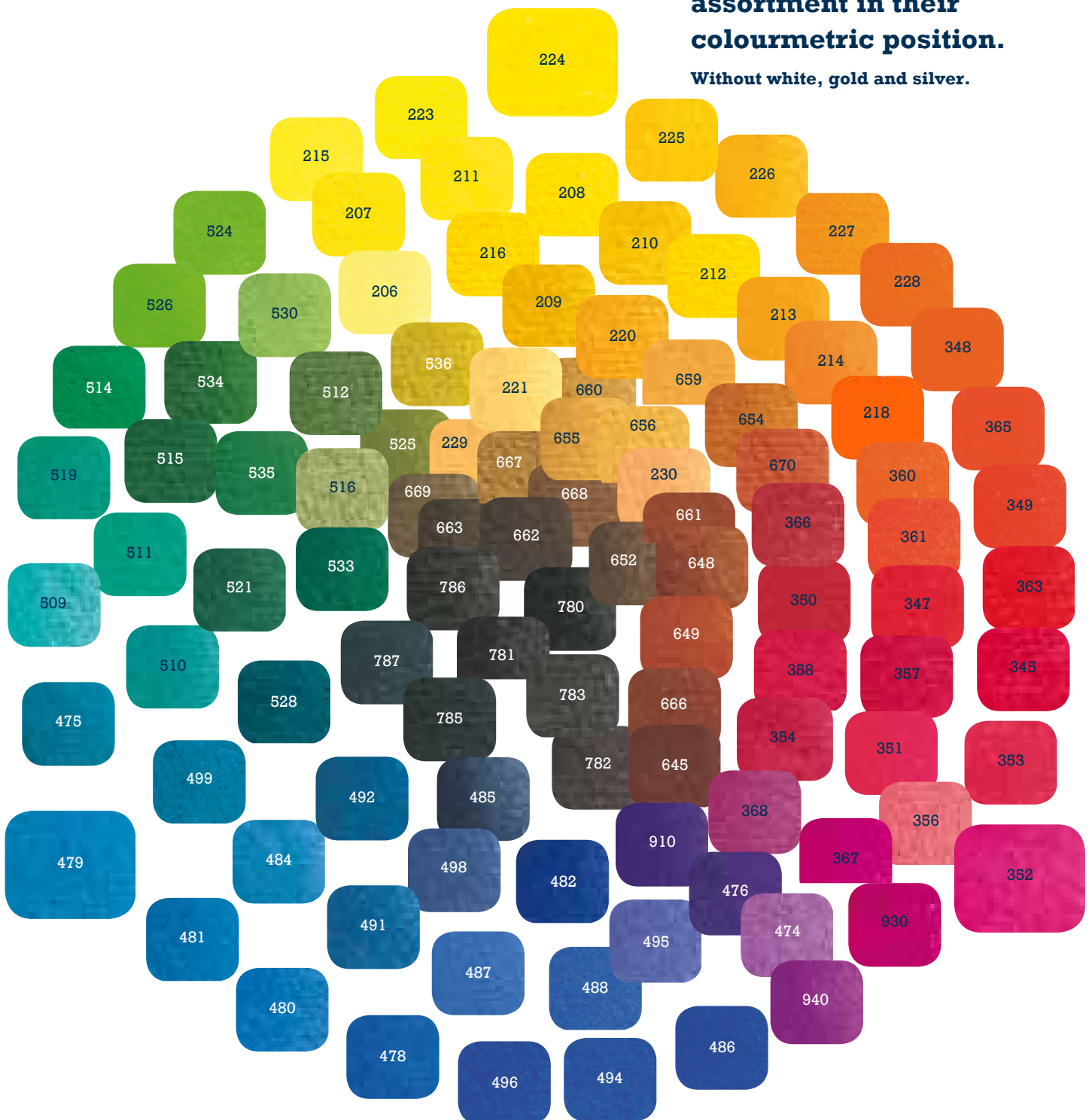
The colour combination, the palette of an artist, mostly follows esthetical guidelines – and later – the practical use. Manufacturers of artists' colours must consider and follow a didactical purpose of the colour selection for best possible mixing to satisfy most artists. Other important factors are the transparency and lightfastness.

Some colours are very good looking under coloristical criteria, but less lightfast. Other colours are not quite as transparent as water-colours basically should be. Especially most of the earth colours tend to be semi-opaque or opaque when they are not applied in a very diluted manner. When composing the standard boxes – those are the long metal sets – the lightfastness and transparency of the selection was a more important criteria compared to the boxes for special subjects or short set boxes. Colour combinations for specific user situations have to satisfy those coloristical requirements.



**All colours of the Schmincke
HORADAM®AQUARELL
assortment in their
colourmetric position.**

Without white, gold and silver.



Good artists' colours translate coloristic possibilities provided by nature and/or the colour chemistry in as many as possible clear single pigment artists' colours. However the placing of all water-colours in a systematic structure (above) may be of practical use for the artist when selecting colours and also for mixing.

This systematic structure also shows how many valuable hues for practical painting purpose may not be integrated in the clear colour circle of the outer rim of the structure. The 3 primary colours Y (224), M (352) and C (479) have been specially accentuated to emphasize their importance for colour theory.



Priming

50 702 AQUA primer, fine – with even surface for water-colour painting

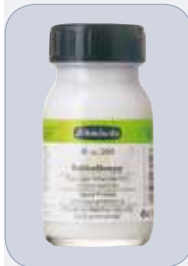
For various surfaces like canvas, painting boards, wood etc. May be tinted with tube water-colour or acrylics. Apply at least 3 layers of AQUA primer, fine on the surface with brush or roller. In case of thinning before use, please apply several layers of primer. Start painting with water-colour after drying. Clean brush and roller with water and soap immediately after use.



50 703 AQUA primer, coarse – with structured surface for water-colour painting

For various surfaces like canvas, painting boards, wood etc. May be tinted with tube water-colour or acrylics. To be applied with a spatula. Start painting with water-colour after drying. Clean spatula with water immediately after use.

Application: painting mediums



50 300 Liquid frisket

*Liquid, colourless gum emulsion for masking specific fields, which should remain white, on water-colour paper, smooth drawing carton, photographs or films. Apply undiluted with writing pen, cotton or wooden stick. To be coloured only after drying. Rub off easily with finger or eraser. **Attention:** Use only on dry paper. Pretest for applicability of the respective paper is necessary. Do not leave masking fluid longer than 2 days on the paper. Do not pull off masking fluid but rub off gently. Remove completely as soon as possible. According to paper quality is slight yellowing possible. Clean equipment immediately with water and soap. Close bottle properly and avoid frost.*



50 302 Gum arabic, concentrated

Viscous flow and binding medium for all gouache and water-colours. Improves transparency, adhesion of undercoats, gloss and intensity of colours. Binder for own production of colours with pigments. Dilutable with water.



50 031 Oxgall, cleaned

Natural wetting agent for degreasing of undercoats before painting with water-colours or gouache and – used sparingly – suitable as levelling agent for water-colours. Dissolved oxgall tends to flocculate by long storage but this has no influence on the application.



14 031 ONETZ

Thickened oxgall in pans is to be used as a levelling and wetting agent for water-colours. ONETZ diluted with water decreases surface tension of liquid colours and degreases undercoats such as lacquered palettes of painting boxes.



50 701 AQUA fix – for water-colours, increases resistance to water

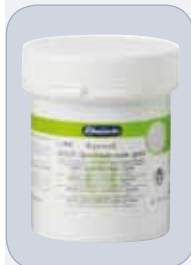
If added to the colour it dries to be waterproof. Avoids dissolving of colour when painted in several layers and allows more possibilities for transparent painting. To be used for water-colour painting instead of water. **Attention:** Do not mix medium + colour in the pan. Clean brush and palette thoroughly with water and soap immediately after use.

Application: additives, pastes and effects



50 706 AQUA modelling paste, fine – for structures with even surfaces

To paint with water-colours. Allows three-dimensional operation and new structure effects. Apply on surface with spatula and paint over with water-colour, when modelling paste is dry. May also be tinted with tube water-colour or acrylic colour. Store in a cool place.



50 707 AQUA modelling paste, coarse – for structures with coarse surface

To paint with water-colours. Allows three-dimensional operation and new structure effects. Apply on surface with spatula and paint over with water-colour, when modelling paste is dry. May also be tinted with tube water-colour or acrylic colour. Store in a cool place.



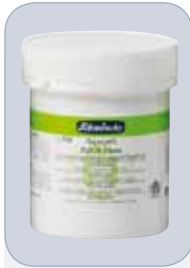
50 715 AQUA collage – increases adhesion of collage material

Apply AQUA collage pure or mixed with water-colour on the painting and strew or press the respective particles (textiles, silk paper, pigments, sand) into the wet medium. Stays water-soluble. AQUA collage mixed with AQUA fix becomes waterproof and can be painted over. **Attention:** Do not mix colour + medium in the pan.



50 720 AQUA shine – for pearl effects

Apply AQUA shine pure or mixed with water-colour. Dilution reduces pearl effect. Particles of picture achieve nacreous or shimmering gloss. The medium slightly retards drying of the colours and stays water-soluble. **Attention:** Do not mix colour + medium in the pan. Shake before use.



50 725 AQUA pasto – thickener for water-colours

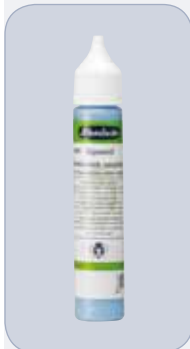
A transparent thickening medium which can be used pure or mixed with water-colour in tubes. Reduces colour flow and improves gloss. Suitable for techniques with spatula in thin layers. It dries slowly and stays water-soluble. Store in a cool place.



50 730 Masking fluid, colourless – in dispensing bottle, without ammonia

Removable colourless masking fluid for water-colours. Especially for fine details. Masking fluid covers water-repellent. Overpainting only when masking fluid is completely dry. After drying rub off easily with finger or eraser. Also recommended for thin acrylic colours and airbrush.

Attention: Use only on dry paper. Pretest for applicability of the respective paper is necessary. Do not leave masking fluid longer than 2 days on the paper. If dispensing unit is blocked clean with a needle. Do not pull off masking fluid but rub off gently.



50 731 Masking fluid, coloured – in dispensing bottle, without ammonia

Removable blue masking fluid for water-colours. Especially for fine details. Masking fluid covers water-repellent. Overpainting only when masking fluid is completely dry. After drying rub off easily with finger or eraser. Also recommended for thin acrylic colours and airbrush.

Attention: Use only on dry paper. Pretest for applicability of the respective paper is necessary. Do not leave masking fluid longer than 2 days on the paper. If dispensing unit is blocked clean with a needle. Do not pull off masking fluid but rub off gently.



50 735 AQUA effect spray – for coincidental bizarre surface effects on water-colour paintings

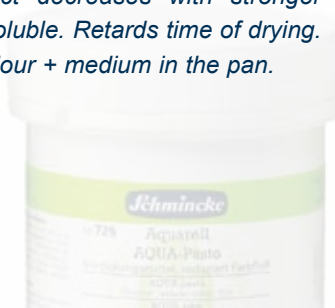
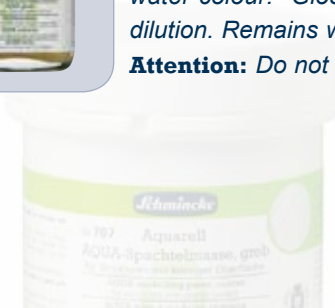
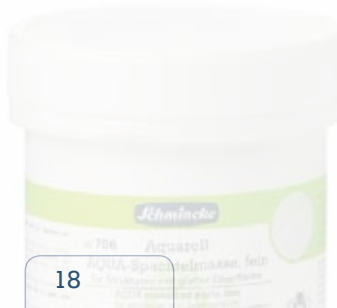
Spray AQUA effect spray into the still humid water-colour. Spraying distance approx. 20 – 30 cm. No effect on strong absorbent surfaces. **Attention:** Specific fields to remain original, should be prepared with a mask.



50 740 AQUA gloss – increases gloss and brilliance of water-colours

To be applied on dry water-colour pure or mixed with water-colour. Gloss effect decreases with stronger dilution. Remains water-soluble. Retards time of drying.

Attention: Do not mix colour + medium in the pan.





Varnish

50 112 Varnish for water-colours

Alcoholic varnish for technical water-colour proceedings. Intensifies colour tones and increases transparency of water-colour papers. Brushes to be cleaned with alcohol.



50 403 AEROSPRAY Fixative for water-colours

Final fixative for water-colours. Protects water-colour paintings from finger-prints, humidity and dust. No colour changes when applied in thin layers. May increase transparency of water-colour paper. Shake well before use. Spray in criss-cross fashion at a distance of 30 – 40 cm. Clean sticky spray tops with acetone.



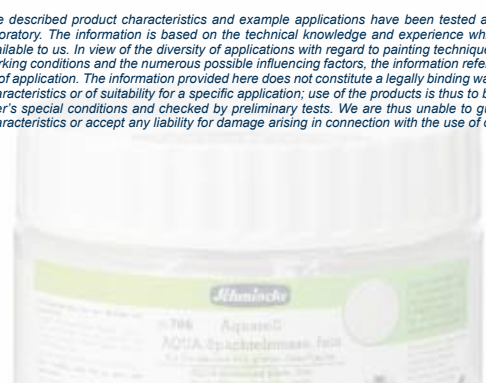
50 405 AEROSPRAY fixative universal

Universally applicable fixative with UV-protection based on alcohol for several painting techniques. Final fixative for charcoal, pencil, pastel, water-colour, gouache, art prints, ink-jet prints, photographs (pretests are recommended). The fixative is fast-drying, satin-glossy, non-yellowing and forms a clear and resistant film. Shake well before use. Spray in criss-cross fashion at a distance of 30 – 40 cm. Repeat procedure when surface is dry, until requested fixing level is achieved. Clean sticky spray tops with alcohol.



50 584 AEROSPRAY mat varnish

A mat effect is achieved with acrylic mat varnish – a mat, fast-drying acrylic resin varnish for spraying onto the dried painting. Spraying distance approx. 30 – 40 cm; spray in criss-cross fashion. After drying, repeat until you achieve the desired mat surface finish.



The described product characteristics and example applications have been tested at the Schmincke laboratory. The information is based on the technical knowledge and experience which are presently available to us. In view of the diversity of applications with regard to painting techniques, materials and working conditions and the numerous possible influencing factors, the information refers to general areas of application. The information provided here does not constitute a legally binding warranty of specific characteristics or of suitability for a specific application; use of the products is thus to be adapted to the user's special conditions and checked by preliminary tests. We are thus unable to guarantee product characteristics or accept any liability for damage arising in connection with the use of our products.



Art.-Nr. / Art.-No. 74 106
 s HORADAM[®] AQUARELL
 6 large pans, empty set:
 74 913 (without illustration)



Art.-Nr. / Art.-No. 74 012
 s HORADAM[®] AQUARELL
 12 small pans + brush,
 empty set: 74 913 (without illustration)



Art.-Nr. / Art.-No. 74 312 HORADAM[®] AQUARELL
 12 large pans, empty set: 74 924 (without illustration)



Art.-Nr. / Art.-No. 74 408
 s HORADAM[®] AQUARELL
 8 small pans with
 water tank



Art.-Nr. / Art.-No. 74 412
 s HORADAM[®] AQUARELL
 12 small pans + space for 12
 additional small pans, empty
 set: 74 924 (without illustration)



Art.-Nr. / Art.-No. 74 424
 HORADAM[®] AQUARELL
 24 small pans, empty set: 74 924
 (without illustration)



Art.-Nr. / Art.-No. 74 318
 s HORADAM[®] AQUARELL
 18 large pans, empty set:
 74 936 (without illustration)



Art.-Nr. / Art.-No. 74 324
 s HORADAM[®] AQUARELL
 24 large pans, empty set: 74 948
 (without illustration)



Art.-Nr. / Art.-No. 74 436
 s HORADAM[®] AQUARELL
 36 small pans,
 empty set: 74 936
 (without illustration)



Art.-Nr. / Art.-No. 74 112
 HORADAM[®] AQUARELL s
 12 x 5 ml tubes, empty
 set: 74 912 (without
 illustration)



Art.-Nr. / Art.-No. 74 448
 HORADAM[®] AQUARELL s
 48 small pans, empty set: 74 948
 (without illustration)



Art.-Nr. / Art.-No. 74 548
 s HORADAM[®] AQUARELL
 47 small pans,
 ONETZ + porcelaine
 palette



Art.-Nr. / Art.-No. 74 115
 HORADAM[®] AQUARELL s
 15 x 5 ml tubes,
 empty set: 74 915
 (without illustration)

Art.-Nr. / Art.-No. 74 224
 s HORADAM[®] AQUARELL
 24 x 5 ml tubes + porcelaine palette

