

High-gloss Bronze Concentrates, Pastes



High-gloss bronzes for mixing with solvent-based or UV-based bronze binders or printing varnishes

Mixing pastes for high-gloss and metallic brilliant shades

Vers. 4
2010
8th Aug.

Field of Application

High-gloss bronze concentrates are suitable for being mixed with transparent bronze binders or printing varnishes in order to produce high-gloss and metallic brilliant bronze shades.

The S and S-UV concentrates have been formulated in a way to permit their universal use in a broad range of solvent-based or UV-based screen and pad printing inks.

Except Marapol PY and Tampapol TPY, the concentrates can be used with all our 1- and 2-component inks making it possible to print on a variety of substrates which is almost unlimited with the appropriate choice of bronze binder or printing varnish.

Since all the print substrates mentioned may be different in printability even within an individual type, preliminary trials are essential to determine suitability for the intended use.

High-gloss bronzes in solvent-based ink systems can also be processed with a spray gun, but preliminary trials are absolutely necessary for this process.

We recommend to filter the thinned press-ready ink (25 µm screen) before processing it as otherwise bubbles in the ink film may arise.

Characteristics

Drying, curing

The drying properties of bronzes in solvent-based ink systems depend on the drying characteristics of the used ink type. For UV inks, the curing speed depends on the used ink system, as well as on the concentration of S-UV Bronze.

Degree of gloss

High-gloss bronze concentrates excel due to their exceptionally high degree of gloss (up to 95). This degree depends on the substrate's structure, the degree of gloss of the ink system itself and the drying method used. Air-dried prints exhibit a higher degree of gloss than tunnel-dried ones since, with the air-drying method, the film of wet ink has more time to achieve a uniform levelling resulting thus in a glossier appearance.

The use of matt varnishes or bronze binders significantly reduces the degree of gloss of high-gloss bronzes and can, therefore, not be recommended.

Fade resistance

The basic silver pigment used in all bronze concentrates is highly fade resistant and suitable for outdoor use. Therefore, best results are achieved with the purely metallic Silver Concentrates S 291, S-UV 291, and S-UV 191.

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All gold pastes have a high-quality pigmentation exhibiting greater variations in colour under the effects of weathering than purely metallic silver bronzes.

For bronzes at long-term outdoor use, we generally recommend to use coarser fabrics for a thicker printed ink film, as well as stable ink systems for the bronze mixture, an overvarnishing, and a higher concentration of pigment.

Stress resistance

High-gloss bronzes exhibit an extreme surface durability and rub-resistance. As a result, no further protective varnishing is required.

Chemical resistance to alcohol, petrol, etc. depends on the type and characteristics of the printing varnish or binder used.

With the use of a suitable ink system, all high-gloss bronzes can be laminated and moulded.

Overprintability

High-gloss bronzes can be overprinted with other colour shades of the same ink system as used in the bronze mixture without any problem.

For the use of 2-component ink systems, please consider the usual overprinting times. Care should be taken, however, not to use an excessive amount of levelling agent (> 1 %) as this may reduce adhesion when overprinting.

Range

Shades for solvent-based screen and pad printing inks

Bronze mixtures with a pot life of 12 hours, high brilliance and good opacity:

S 291	High-gloss Silver (5:1 – 10:1)
S 292	High-gloss Rich Pale Gold (5:1 – 10:1)
S 293	High-gloss Rich Gold (5:1 – 10:1)

Shades for UV-based screen printing inks

Bronze mixtures with a pot life of max. 12 hours, best brilliance and good opacity. (light texture)

S-UV 291	High-gloss Silver (5:1 – 10:1)
S-UV 293	High-gloss Rich Gold (5:1 – 10:1)

(without texture)

S-UV 296	High-gloss Silver (5:1 – 10:1)
S-UV 297	High-gloss Rich Pale Gold (5:1 – 10:1)
S-UV 298	High Pale Gold (5:1 – 10:1)

Economically priced Bronze mixtures with a pot life of 6 months, high brilliance and medium opacity (light texture)

S-UV 191	High-gloss Silver (5:1)
S-UV 192	Rich Pale Gold (5:1)
S-UV 193	Rich Gold (5:1)

All shades are based on organic pigments, therefore, the heavy metal content complies with the EEC regulations EN 71, part 3, "safety of toys" - migration of specific elements. All high-gloss bronzes are therefore suited for printing onto toys if mixed with an appropriate ink system.

All bronze shades are shown in a separate bronze shade card.

Mixture ratios, fabrics

All figures in brackets are guidelines which can be changed according to opacity and ink price. The ratio figures in brackets refer to the mixture bronze binder to bronze paste whereas the first figure is standing for the parts by weight of bronze binder.

Due to the reduced opacity of the S-UV 191 Bronzes, we recommend to always use the maximum mixture of 5:1 in this case.

For mixing high-gloss bronzes, the quantity of bronze paste is weighed and put in a mixing beaker first which is filled up slowly with printing varnish or bronze binder.

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The subsequent stirring for obtaining a homogenous mixture can be made either by hand or with a slowly rotating mixer. Excessively powerful mechanical mixing will reduce the degree of gloss of the bronze.

Due to the smaller pigment size compared to bronze powders, it is possible to work with finer fabrics from 140-31 to 150-34 at an acceptable ink price.

Other interesting effects can be achieved by mixing high-gloss bronzes with transparent shades, transparent Pantone® shades or mono-pigmented UV shades.

For reasons of compatibility, the basic varnish of the bronze mixture and of the mixed shade must be from the same ink series. Mixtures of different types of ink can reduce resistance to weathering.

Shelf Life

High-gloss bronzes can be stored for at least a year provided that the cans are closed and stored absolutely hermetically.

All high-gloss bronzes are subject to segregating if stored for a longer period of time. Therefore, please stir well before use.

Labelling

For our high-gloss bronze concentrates and its additives and auxiliaries there are current Material Safety Data Sheets according to EC-regulation 1907/2006 covering in detail all relevant safety data including the labelling according to the present EC regulations as to health and safety labelling requirements. Such health and safety data may also be obtained from the respective label.

Note

Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products nor their suitability for each application.

You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for specific application is exclusively your responsibility.

Should, however, any liability claims arise, such claims shall be limited to the value of the goods delivered by us and utilised by you with respect to any and all damages not caused intentionally or by gross negligence.