Pearlescent Pigments

Naturfarben GmbH

- **GENERAL**

Lustre is fascinating, lustre shows value. Precious metals, pearls, crystal, jewels and silk were always in great demand. But lustre is a complex topic. The eye can distinguish the smallest nuances from gleaming to resplendence and sparkling. Pearls are forming from a grain of sand getting into a mussel, and the mussel covers the grain of sand with thin layers of protein and calcium carbonate. Interference colours results from different reflections in different depths. It is a selective reflection which occurs in a thin, transparent layer. The iridescent play of colours is well known from feathers, butterflies and beetles.

- **INGREDIENTS (FULL DECLARATION)**

Pearlescent Pigments have a core made of mica which is coated with one or more layers of metal oxide. Mica is a natural mineral which is found all over the world.
Silver lustre pigments have a core of mica which is coated with a relatively thin layer of titanium dioxide.
Interference pigments are made similar to silver lustre pigments.
Their layer of titanium dioxide is much thicker. Because of strictly maintaining defined layer thicknesses, interference pigments with certain colours can be produced. Two different colours appear depending on the viewing angle, e.g. a dazzling green, while the complementary colour is seen from another angle. This applies also for the other complementary colours.
Gold lustre pigments consist of a mica core, coated with a layer of titanium dioxide and a layer of iron oxide.

Metal lustre pigments consist of a mica core, coated with a layer of iron oxide.
The pigments are physiological harmless and can also be used for food packagings and toys. Pearlescent pigments are resistant against acidic media and alkalies. They are environmentally friendly because they are virtually insoluble in water and free of pollutant heavy metals. The pigments are non-flammable and do not self-ignite.

They are electrical non-conductive and can stand temperatures up to 800 ºC. They are lightfast and weatherproof.

- **APPLICATION**

Pearlescent Pigments do only have their striking effects if they are mixed into a colourless binding agent like e.g.:
Wall Lazure Binding Agent, Multi Purpose Wax, oils for floorings, waterglass or they can be mixed into the final layer of Stuccolustro or on Tadelakt surfaces.
The contingent of Pearlescent Pigments should not exceed 5 - 8 % related to the binding agent. For example: 50 g of Pearlescent Pigments for 1 litre of Multi Purpose Wax.

- **NOTES**

Mixing of different interference pigments is "prohibited". Not an interesting new hue is achieved, the result is an unattractive grey. But the application of Pearlescent Pigments on coloured surfaces, e.g. on black, is very interesting. A red interference pigment on a white surface seems to be red from one viewing angle and light green from another angle. The Pearlescent Pigments can also be mixed with transparent paint pigments. Transparent pigments are e.g. Ultramarine Blue, Terra di Siena Nature and Burnt and some iron oxides. But there are no noteworthy experiences regarding this topic. There are also no experiences for the combination of mixing interference pigments with absorption pigments on coloured surfaces.
We recommend to add a little soot to the Metal lustre pigments to achieve "antique" metal surfaces.

- **USAGE**

The mixing process should be carried out properly and gentle. The small, thin pigment plates are very sensitive to breaking, and a tough mechanical treatment would lead to a reduction of gloss. As a result of the geometry of the pigment plates with a specific surface of 5 - 10 m²/g, their wetting is relatively simple and quick.

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