

## ART.227/30 PATINA COPPER Series F432

### Product description

Shiny metallized enamel for spray gilding on non-metallic substrates.

"Not intended for uses referred to in Directive 2004/42/EC - Legislative Decree 161/06"

### Features

Shiny metallized enamel, with a fine and smooth appearance and good oxidation resistance, for spray gilding on mostly non-metallic substrates.

### Use

Excellent quality finishing with an intense decorative effect for the reproduction of gilding with different shades, on various supports. The application ranges from minute decoration on terracotta, plaster, ceramic, marble resin, wood, metals and plastics, to more industrial applications such as for the finishing of trophies, chandeliers, artistic objects, plaques.

### Supply data

Composition	Synthetic modified		
Colour	<b>Copper</b>		
Vix	from 60 to 100 seconds Ford Cup 4		
Specific gravity	from 1 to 1,1	g/ml	
Gloss	Matt metallic		

The following supply data refer to colour ART.227/51 Pale Gold Patina.

Solid content	% by weight	27,7	± 2%
	% by volume	15,7	± 2%
C.O.V.	g/l	741	± 20 g/l
S.O.V.	% by weight	72	± 2%

### Support preparation

**Carefully follow Additional product information- Point 1)**

Each type of substrate can be painted if suitably cleaned of grease and dirt and possibly treated with a suitable anchoring or protective primer.

## APPLICATION CONDITIONS AND METHOD

Application by spray is recommended (P = 4-5 atm/nozzle 1,5-1,7 mm).

Mix well before use.

### Environment conditions (°C e R.H.)

**Carefully follow Additional product information- Point 2)**

Application temperature:

Support: 10° - 40°C and always 3°C above the Dew Point

Environment: Min 10°C - Max 40°C

Relative humidity: Max 60%

### Application data and suggestions

**Carefully follow Additional product information- Point 3)**

Dilution	30 - 40% with Nitro thinner U721 SC 109
Dry film thickness	10 microns per coat
N. suggested coats	1-2 coats until the indicated/necessary dry film thickness is obtained
Foced drying	It is possible to speed up oven drying at 70°C for a few minutes
Drying temperature	ad aria a t.a. di 20°C
Dust free	10 minutes at the indicated thickness per coat

## ART.227/30 PATINA COPPER Series F432

Out of touch	1 hour at the indicated thickness per coat
Dry through	12 hours at the indicated thickness per coat
Overcoating lapse	3-4 hour
Theoretical average spreading rate (*)	15 m <sup>2</sup> /Kg - 15 m <sup>2</sup> /l
Theoretical average consumption (*)	65 g/m <sup>2</sup>

### **Application equipment**

Standard spray equipment:  
 Shovel guns, mixed air

### **Reference to application systems**

#### **Painting systems**

The product can be used in the following painting systems:

**For superior protection and longer durability outside, we recommend overcoating with clear acrylic paints. For particular painting systems, it is recommended to ask for additional technical instructions.**

### **Shelf life**

6 months in original sealed containers at +5/+35°C  
 After this period it could alter the aesthetic appearance or even gelatinize. Avoid warehousing beyond deadlines.

### **Pack size available**

0,250 l

### **Advice and warnings**

### **Sanitary labelling**

See MSDS.

Handle the products with care following the regulations in effect regarding the personal and environmental safety.

### **Notes**

(\*) **Spreading rate:** the spreading rates per layer are only indicative. Application test is suggested.

**The data reported in this data sheet are obtained using only Franchi&Kim products (coatings, hardeners, solvents, tap water for dilution) applied in accordance with the specifications described. Improper use of thinners and/or hardeners other than those stated and not produced by Franchi&Kim can compromise the application characteristics, the performance and the final polymerization of product.**

The indicated application times (Pot Life, dust free, touch free etc.) are referred to an average temperature of 20°C, unless differently specified.

## ART.227/30 PATINA COPPER Series F432

### ADDITIONAL PRODUCT INFORMATION

#### 1) Preparation of the support

- This sector shows the pre-treatment processes of the surfaces before actual painting. **Application** on surfaces other than those shown is indirectly **discouraged**, except where approval for this is received from the technical department

The process of cleaning/pre-treatment is very important in order to obtain excellent results from the painting cycles. The pre-treatment can be done in various ways and according to different criteria, which have a single result: the surfaces to be painted must be perfectly clean and dry, free from organic and/or inorganic contaminants, such as oil, grease, rust, calamine, oxides, soluble salts, dust, neutral pH.

Please find below the methods to use to prepare metal surfaces.

- **Degreasing:** done with solvents (or solvent vapours) or water-soluble cleansers, by hand or in automatic systems (tunnels or industrial washers). The aim is to dissolve and remove oil and grease.
- **Manual and mechanical cleaning:** removal of flakes of rust and oil paint, using tools (grinders, discs and abrasive papers, metal brushes, scrapers etc.), removed by hand or mechanically. As these processes do not remove greasy substances, they should be preceded and followed by degreasing, as described above.

#### Degrees of mechanical preparation

- **St2** – removal by tapping, scraping, sanding and metal brushing of loose fish scale and foreign substances. At the end of the treatment, the surfaces take on an almost metallic appearance
- **St3** – treatment of the surface of steel, carried out as above, but more thoroughly. At the end, it has an outstandingly metallic appearance.

#### Degrees of preparation by sanding (or grit blasting or shot peening)

- **Sa1 – Light sanding** corresponding to a good brushing. All easily removable parts, rust or other foreign particles must be removed.
- **Sa2 – Thorough sanding**, corresponding to commercial sanding. Fish scale, rust and foreign particles must be almost totally eliminated. After this operation, the surface looks grey.
- **Sa2 ½ - Very thorough sanding**, corresponding to sanding metal until it is near white; like the above, this operation must leave the surface perfectly clean and any small impurities that still exist must look like minor variations of colour on the support. After this operation, the surface is near white in appearance.
- **Sa3 – white metal sanding** must lead to obtaining a perfectly clean metal surface.

Consult the photographic references to the visual evaluation of the substrata before the painting process in accordance with ISO Standard 8501

#### 2) CONDITIONS AND METHODS OF APPLICATION (°C e U.R.)

Environmental conditions (°C and R.H.)

Application temperature: these are the limits of temperature of the support and the air in the environment within which application and subsequent drying take place. In general, the following are indicated:

**Support:** between + 5°C and + 35°C and always 3°C above the Dew Point

**Environment:** min + 5°C and max + 35°C

**Relative humidity:** 60%

The term *Dew Point* indicates the temperature at which (at specific percentages of R.H.), there is the formation of

## ART.227/30 PATINA COPPER Series F432

condensation, which can be deposited on metal surfaces (and on the film) in the form of condensation or even ice. According to a good rule, a painting product should be applied only at temperatures of at least 3°C above the Dew Point. Tables exist that help establish these values.

### 3) Information on application and recommendations

**Dilution** This refers to the type of specific diluents required and the percentage of use. Incorrect use of diluents is often the cause of a number of problems, both during the phase of application and for the film of paint once dry.

E.g., the use of nitro diluents for application of polyurethane cycles can create phenomena of dimpling on the surface of the dried film; in addition, the presence of partially reactive solvents in a nitro diluents can give rise of unwanted reactions with the *isocyanate* component, thus reducing the aesthetic and mechanical characteristics of the system.

Furthermore, the choice of unsuitable diluents (regenerated ones) can cause problems of colour change, sedimentation of the diluted product, variations of glossiness and surface haziness.

**Application viscosity:** The viscosity we recommend refers to average application at 20°C, therefore it may vary depending on the temperature and method of application used or on the conformation of the object to be painted

### DRYING

This is the time necessary for the film of painting product to dry. The data shown in the product information are calculated at standard conditions of 20°C and a Relative Humidity of 60%; in fact, the data can also undergo variations depending on the climatic conditions and the thickness applied.

In the *bi-component and oxidative* products, with total polymerisation, reference is made to the time necessary for the chemical reaction between component A and component B (catalyst or oxygen) to take place in full. Before this time, the products look dry, but the characteristics of chemical and mechanical resistance are reached only when the polymerisation is complete.

The drying process, up to the phase shown as "Touch dry" mainly depends (as order of importance and of effective influence) on the degree of ventilation present in the environment (greater for water-based products), therefore on the ambient temperature, and lastly on the thickness applied per coat. In particular for the products with physical drying or by oxidation, the drying time also depends on the thicknesses applied, both total and for each coat. In general, a thickness that is double that indicated takes four times as long as the time normally required for drying, with the same ventilation.

**N.B.** After drying, in general the reticulation/polymerisation is not total, but is completed gradually in the following days and even weeks. The painted article has nevertheless reached a sufficient degree of hardening that it can be handled, sanded, stacked, repainted, packaged, shipped and exposed to the exterior, but many of its characteristics may still undergo variations, such as the chemical resistances and hardness (which tend to increase) and the elasticity (which tends to decrease). Therefore, even accelerated tests of resistance (saline mist, wet strength, etc.) must be carried out (unless otherwise indicated) after a period of at least 3 weeks, during which the painted support must be kept in stable conditions of temperature and relative humidity, as described by Standard UNI EN ISO 12944-6 under point 5.4 (as defined in ISO 554).

**Overcoating lapse:** this means the minimum and maximum period to be able to repaint the product with the same paint or with other systems indicated.

In the case of bi-component products, it is possible to overpaint beyond the maximum interval, by sanding and after checking the compatibility of the system of repainting.

## ART.227/30 PATINA COPPER Series F432

**N.B.** all the values linked with the times of drying/polymerisation depend on the thicknesses applied and the environmental conditions where the painting and drying took place, up to total polymerisation. Those shown, if not otherwise indicated, refer to standard environmental conditions **(20°C) and** the recommended thicknesses.

**Resistance to temperature:** indicates the maximum temperature to which the dried film can be exposed without undergoing substantial alterations in performance. It must be remembered that most paints, when they are exposed to high temperatures, tend to change appearance, both at the level of the exact shade and glossiness. If the temperature stays constant (operating temperature) at levels close to the maximum temperature, there will still be a reduction in the resistances (accelerated ageing). The presence of humidity in a warm environment leads to a further loss of the characteristics of the paint, as do sudden changes of temperature: in conditions of a great temperature range, there is greater deterioration of the characteristics of the film.

The temperatures shown refer to a ventilated environment; it is different for immersion in hot liquids for which, unless specifically indicated, **the products are not suitable.**

The information contained herein is, as far as we know, correct and accurate and should therefore be considered. However it does not imply any guarantee by us, as the conditions of use are beyond our control; therefore, they do not exempt the customer from the responsibility of verifying the suitability of the product for the specific intended use. This technical data sheet replaces all the previous versions.