



Effects: PU DECORATIVE-METAL

People have been fascinated by metals since ancient times. Throughout history, man has always tried to make better use of various metals. Now it is impossible to imagine our lives without metal.

Yet a further step is the development of PU DECORATIVE-METAL. This product line is highly versatile and suitable for many substrate materials. The component mixture has a metal content of 80 % at the time of application. It results in a surface consisting almost entirely of metal. This enables forms to be easily created that would not be possible with solid metal, or which would only be possible with a high level of complexity.

PU DECORATIVE-METAL surfaces can currently be realised with copper, bronze, brass, zinc and iron.

PU DECORATIVE-METAL is made up of 3 components:

PU DECORATIVE-METAL Base	DE 48219-0901
PU DECORATIVE-METAL Hardener	DR 4008
PU DECORATIVE-METAL Powder	ZD 3136 Copper
	ZD 3137 Bronze
	ZD 3138 Brass
	ZD 3151 Zinc
	ZD 2690 Iron

Mixing the components:

Gravimetric mixing

Different specific weights mean the mixing ratios are determined gravimetrically and vary depending on the metal powder.

Mixing PU DECORATIVE-METAL with copper, bronze, brass, iron, and zinc powder

PU DECORATIVE-METAL Base	DE 48219-0901	16.0 g
PU DECORATIVE-METAL Hardener	DR 4008	4.0 g
PU DECORATIVE-METAL Powder		80.0 g

		100.0 g

Mixing instructions

Step 1:

Use the specified mixing ratio to mix PU DECORATIVE-METAL Base DE 48219-0901 with PU DECORATIVE-METAL Hardener DR 4008.

Step 2:

Add the selected PU DECORATIVE-METAL Powder ZD 31.. and stir it intensively into the base mixture until the mixture is smooth and free from lumps.



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Application:

Substrates and pretreatment of the substrate

A wide variety of substrates are suitable, e.g. MDF sheets or laminated chipboard pretreated with a PU Basecoat.

Sand the substrate materials beforehand, P 220 – 280.

Application

Application can be by cup gun, brushing, dappling, etc. depending on the desired effect.

For smooth, glossy metal effects:

Spray application via gravity flow cup using a 90 – 100 μ cup sieve.

For antique and textured effects:

Spray application via gravity flow cup and subsequent texturing by hand (dappling, etc.).

Brush application: after drying, it is possible to apply PU Colour lacquers or pastes to accentuate the hollows.

Parameters for application via flow cup on horizontal components

Addition of 5 – 10 % PU DECORATIVE-METAL Thinner DV 4966

Spray nozzle size 1.8 – 2.0 mm

Spray pressure 2 – 3 bar

Application quantity 800 – 1000 g/m² in multiple spray coats

Parameters for application via flow cup on three-dimensional components

Addition of 5 – 10 % PU DECORATIVE-METAL Thinner DV 4966

Addition of 0.3 – 0.5 % PU Thixpaste ZD 3596

Spray nozzle size 1.8 – 2.0 mm

Spray pressure 2 – 3 bar

Application quantity 800 – 1000 g/m² in multiple spray coats

Parameters for putty application for a putty technique effect

Addition of 5 – 10 % PU DECORATIVE-METAL Thinner DV 4966

Addition of 1 – 2 % PU Thixpaste ZD 3596

Maximum application quantity 2000 g/m²

Drying

At least 1 day at 20 °C room temperature.



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Sanding / polishing:

Sanding apparatus

Orbital sander, 5 mm stroke with integrated dust extraction (M)
Graduated surface sanding

Textured surfaces

Starting with 150 or 180 (734 U) grit, then with 280, 400 (334 U), 600, 800, 1000 (260 L) grit, finally with 1000, 3000 (Trizact)

Smooth surfaces

Starting with 280, 400 (334 U), 600, 800, 1000 (260 L) grit, finally with 1000, 3000 (Trizact)

Surface polishing

Hand polishing device with felt pad or polishing bonnet + metal polish (from Unipol, Bauer-richter BRS 05, Mirka metal polish UF3); polish again using a clean felt pad/polishing bonnet.

Surface cleaning

Remove oxidation using a microfiber cloth, such as the Premium 2022 polishing cloth (3M), and a special cleaner like Perfect- IT III 55535 control spray, or stainless steel cleaner & polish (3M) as applicable. Another good alternative is our product DH 1305.

Surface care and protection:

Cleaning surfaces

For normal dry cleaning, we recommend the use of a soft dust cloth. Microfibre or leather cloths are suitable for wet cleaning. Moisten the cloth with water, wring it out and clean with a damp cloth. Sharp household cleaners or scouring substances are unsuitable!

Surface care

Use a microfiber cloth to apply and polish a care product to protect against finger marks and tarnishing, such as high-gloss sealant Perfect IT III 09377 (3M), Mirka Liquid Nano Wax, or Autoglym High Definition Wax.

Surface protection

Coating with Hesse PU Cellulose lacquer
Mixing ratio 10 : 1 with PU Hardener DR 4008
Addition of 30 % PU Thinner DV 4900
Application quantity 60 – 80 g/m²
or use the nano-sealant Nanotol (from CeNano) as per its instructions for use.



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Important note

A drying time of 2 – 3 days should be allowed before recoating with PU Cellulose lacquer to avoid changes to the effect.

Usage example: ageing or oxidation effects

Application methods:

Spray application:

1 x 800 – 900 g/m² (see Application for data) at a mixture of:

16 parts by weight of PU DECORATIVE-METAL Base DE 48219-0901

4 parts by weight of Hardener DR 4008

80 parts by weight of PU DECORATIVE-METAL Powder ZD 2690 Iron

7 parts by weight of Thinner DV 4966

see mixing instructions

Dry for 30 – 60 minutes at 20 °C room temperature

Brushing, dappling:

See mixture above, but with just 1 – 3 % Thinner DV 4966

Dry for at least 24 hours at 20 °C room temperature

Graduated sanding through 280 – 1000 grit, remove sanding dust using a dry cloth

Rusted iron surface:

Use spraying or a brush / sponge to apply 1 x rusting agent for DECORATIVE-METAL DZ 4994-0001 (oxidation will already be visible fairly quickly).

Select the appropriate exposure time depending on the desired effect.

Then clean the surface.

or

Surface example: ageing effect on bronze with patina:

Use spraying or a brush / sponge to apply 1 x ageing agent for DECORATIVE-METAL DZ 4994-0002 (oxidation will already be visible fairly quickly).

Select the appropriate exposure time depending on the desired effect.

Then clean the surface.

If desired, fix effect by spray application as follows:

1 x PU Cellulose lacquer DE 45004-0016

Mixing ratio 10 : 1 with PU Hardener DR 4008

+ 20 – 30 % Thinner DV 4900

Dry for at least 16 hours at 20 °C room temperature

Warning: Oxidation will continue without fixing!



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Further user information:

Even metals are subject to certain variations in colour tone. Sufficient material for an item should therefore be ordered. Colour tone deviations in subsequent deliveries cannot be excluded.

Metals and metallic surfaces are subject to natural oxidation, which results in changes to the colour tone. For cleaning and care, we recommend the products listed in our presentation. Any other polishes and cleaning products may result in changes to the colour tone and effect.

Special instructions:

Specialist knowledge is required when selecting the workpiece, preparing the substrate, mixing and preparing the individual components and treating coated surfaces.

It is essential when sanding to ensure that the sanding dust is adequately extracted.

Our competent sales representatives will be happy to advise you and provide training to impart the skills required.

Minimum order quantity:

The minimum order quantity for metal powder is 1 x 5 kg.

Note:

This information is purely advisory and is based on the best knowledge available after careful research in line with current state of the art technology. The information is not legally binding. We also refer you to our Terms and Conditions.

A material safety data sheet is available as per Regulation (EC) No. 1907/2006.