GLASS DECORATION · WATER-BASED

XP 699

Water-based, low-VOC acrylic–melamine paint for industrial glass decoration

FINISH

Matt · semi-matt · gloss
according to customer preference

1.23 g/cm³	1800 mPa·s	160 °C	≥ 500	≈ 52 g/L
Specific gravity (20 °C)	Viscosity (Brookfield)	Baking, 20 min	Dishwasher cycles	VOC (ISO 11890-2)

Product description

XP 699 is a water-based, environmentally friendly glass paint with low VOC, based on acrylic dispersion and melamine resin. Its silane additive gives excellent adhesion to glass. It is a high-performance product for industrial glass decoration and can be produced in matt, semi-matt or gloss versions.

Application areas

- Glass bottle and jar decoration
- Glassware and decorative glass coatings
- Architectural glass
- Household glass – plates and drinking glasses

Advantages

- Low VOC – environmentally friendly
- Water-based – sustainable production
- Excellent adhesion to glass with silane
- High dishwasher resistance
- Heat-resistant, homogeneous film
- Matt, semi-matt or gloss versions

Position in the system

Cured glass paint — THIS PRODUCT
XP 699 · oven-cured

Glass substrate
Clean, oil- and silicone-free glass

Industrial glass decoration

Spray-applied, oven-cured glass paint

Performance

Typical results of the oven-cured film on glass.

≥ 500	GT0 / 5B	22 mg	ΔE* ≤ 2.0	≈ 52 g/L
Dishwasher · EN 12875-1	Adhesion · ISO 2409	Wet scrub · 2500 cycles	UV · QUV 500 h	VOC · ISO 11890-2

Dishwasher test at 70 °C with alkaline detergent: no change ≥ 500 cycles, slight matting at 600 cycles.

unica | Boytem
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Technical data (at +20 °C)

Specific gravity (20 °C)	1.23 g/cm³ (ISO 2811)
Viscosity (Brookfield, 25 °C)	1800 mPa·s (ASTM D2196)
Flash-off (23 °C, 50 % RH)	10 min
Baking	160 °C / 20 min
Dishwasher resistance	≥ 500 cycles (EN 12875-1)

VOC	≈ 52 g/L (ISO 11890-2)
Adhesion on glass	GT0 / 5B (ISO 2409 / ASTM D3359)
Wet scrub (2500 cycles)	22 mg loss (ASTM 4213)
UV resistance (QUV 500 h)	ΔE* ≤ 2.0 (ASTM G154)

Chemical resistance · 5 = best, 0 = worst

Ethyl alcohol 1 h – 5 | NaOH 10 % 1 h – 5 | Acetone 1 h – 5 | JUS G1 1 h – 5 | Nivea cream 16 h – 4 | Atrix cream 16 h – 4 | Sebamed cream 16 h – 4

Application procedure

01 — Surface preparation
The glass must be clean and free of oil, silicone, dust and fingerprints before decoration.

02 — Mixing
Stir with a high-speed mixer until homogeneous, add the complete activator and mix again. Rest the mixture for 1–2 min.

03 — Application
Apply by spray for an even distribution. Flash-off 5–10 min at ambient conditions.

04 — Curing
Bake in a curing oven at 160 °C for 20 min (or 140 °C for 30 min).

Mixing ratio (by weight)

5 kg

- ○ **5 kg** Glass paint
- ● **0.25 kg** Activator

Also supplied as 15 kg + 0.75 kg activator. Always add the complete activator.

Curing
160 °C / 20 min
Or 140 °C for 30 min in a curing oven.

Flash-off
5–10 min
At ambient conditions (10 min at 23 °C, 50 % RH).

Dishwasher resistance
≥ 500 cycles
EN 12875-1 – slight matting only at 600 cycles.

Important: always add the complete activator and make sure the mixture is homogeneous before spraying.

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Packaging

- 5 kg + 0.25 kg activator
- 15 kg + 0.75 kg activator

Storage

- Store unopened in original packaging at +15…+35 °C in closed, dry areas.
- Protect from direct sunlight and frost.
- Shelf life: 12 months from production.

Safety

- Water-based and non-flammable.
- Not hazardous; contains no formaldehyde, asbestos, mercury, lead or chromates.
- Use suitable PPE; see the MSDS.

LEGAL NOTE

The explanations provided in this technical data sheet are based on test evaluations and results conducted according to relevant standards and are intended to guide applicators. As workmanship, weather conditions, construction, equipment used and other variables that may affect results are entirely beyond our control, UNICA does not provide any explicit or implicit warranty regarding this material. UNICA only guarantees that the material conforms to its product specifications, and its sole responsibility towards the buyer or user of this product is limited to the replacement value of the product in case of manufacturing defects. Under no circumstances shall UNICA be liable for any direct or incidental, special or consequential injury, loss or damage arising from the material or its application. UNICA shall not be held responsible in any way for any defects, alterations or changes in conditions in the substrate where its products are applied.