



Powder coatings versus liquid coatings in architectural applications

Technical information TI 113

Criteria	Powder coatings	Liquid coatings
Surfaces / Coat properties / Film property	<ul style="list-style-type: none">- High chemical and mechanical resistance when used in industrial applications- High elasticity and impact resistance- Powder coating systems for façade exteriors with Qualicoat and/or GSB approvals	<ul style="list-style-type: none">- High chemical and mechanical resistance when used in industrial applications- Impact resistance and elasticity are product-dependent- Weather-resistant systems in the gloss range (PVDF-based)
Substrate	<ul style="list-style-type: none">- Slight irregularities in the substrate are excellently overlaid thanks to the high coating thickness- Excellent connection with the pre-treated substrate	<ul style="list-style-type: none">- Instances of unevenness and scratches must be smoothed or primed prior to coating- Good substrate moistening and adhesive strength
Cost-effectiveness / application efficiency	<ul style="list-style-type: none">- 60% to 80% initial application efficiency- Overspray is recovered and supplied back into the powder circuit	<ul style="list-style-type: none">- 30% to 40% initial application efficiency- Overspray cannot be recovered when dealing with systems which contain solvents
Ecology	<ul style="list-style-type: none">- Solvent-free- Declaration-free- 100% solids- Minimal risk of fire- EPD certification (environmental product declaration)	<ul style="list-style-type: none">- Contains solvents- VOC emission- 35% solids- Increased risk of fire



IGP Pulvertechnik AG
Ringstrasse 30
CH-9500 Wil
Telefon +41 (0)71 929 81 11
Telefax +41 (0)71 929 81 81
www.igp-powder.com
info@igp-powder.com
www.doldgroup.com

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Criteria	Powder coatings	Liquid coatings
Storage / Transport	- No special safety regulations	- Special transport and storage safety regulations
Coating thickness / film thickness	- Up to 120 µm coating thickness possible in a single process - Single-coating application with Qualicoat / GSB seal of quality in façade applications	- Coating thicknesses of 25 - 30 µm in a single coat - 2-coat systems, depending on requirement
Curing process / cross-linking	- Thermally melted and hardened (15 minutes at 160°C to 200°C)	- Chemically (2 component) hardened
Quality / resistance (corrosion DIN EN ISO 9227)	- Excellent results	- Between good and excellent results
Throughput times	- Quick throughput times - The powder coating can be immediately placed under full load after drying through and cooling. - Further processing can be carried out immediately	- Longer throughput times - In the event of air drying, further processing is possible after approx. 24, which is significantly quicker than in the event of forced drying
Processing	- Industrial processing (factory application) required	- Location-independent, direct application on-site possible
Application	- With electrostatic (corona) and tribo-electric plants (tribo), automatable - Facilities are investment-intensive	- With application devices (airless spraying, compressed air spraying), automatable
Procurement volumes	- Articles in stock available for delivery from 2.5 kg - Minimum production volumes are required in some instances	- Available for delivery from between 1 and 2 kg - Mixing ramp / mixing systems available for uni-colours on-site