Technical Data Sheet

Hydrapid-1K-AC Paint

5481 silk gloss
5482 silk matt

Quick-drying, one-component water-based paint with very good weathering resistance in two gloss grades

Field of application

To be used as a quick drying and especially weathering-resistant top coat for Hydrapid-1K-AC Primer 5404.
The build-up of Hydrapid-1K-AC Primer 5404 and Hydrapid-1K-AC Paint 5481 or 5482 is predestined for use in the following fields: building elements/profiles made of steel and aluminum, containers, construction and agriculture machines, shop and trade fair designs, commercial vehicles, silos, steel containers, steel halls, doors and frames, vending machines, etc. The paint system is not suitable for coatings with high requirements in terms of the chemical or solvent resistance.

Properties

- Rapid drying (drying grade T1 according to DIN EN ISO 9117-5 after 45–60 minutes)
- Quick subsequent application is possible
- Very good weathering resistance
- Very good gloss and color stability
- Excellent corrosion protection when combined with Hydrapid-1K-AC Primer 5404 (C4 high based on DIN EN ISO 12944 on degreased sheet steel)
- Very good dew resistance
- High yield
- High resistance to flow
- Water-dilutable
- VOC-conform

Material description

Basis	Watery acrylate resin
Color shades	All common color systems
Gloss grade	5481 silk gloss, 55–65 GU/60° 5482 silk matt, 20–30 GU/60° (in accordance with DIN EN ISO 2813)

Material description

Density	1.08–1.35 g/cm³ [1)] (in accordance with DIN EN ISO 2811)
Theoretical yield	297–364 m²/kg [1)] (at 1 µm dry layer)
VOC content	< 60 g/l
Solids content	42–57 wt %[1)]
Delivery viscosity at 20°C	60–70 sec./DIN 4 mm
Stability	100–150 µm (wet film)
pH value	8.0–9.0
Cross cut	Gt 0 [2)] (in accordance with DIN EN ISO 2409)
Cupping index	> 8 mm [2)] (in accordance with DIN EN ISO 1520)
Impact test	Reverse: ≥ 20 ip [2)] Direct: ≥ 40 ip [2)] (in accordance with ASTM D 2794-69)
Accelerated weathering QUV-B/SE	After 400 hours, the residual gloss ≥ 50% of initial gloss (in accordance with DIN EN ISO 16474-3)
Accelerated weathering Xenon	After 1,000 hours, the residual gloss ≥ 60% of initial gloss (in accordance with DIN EN ISO 16474-2)
Flash point	Non-flammable
Labeling	See current safety data sheet.

[1)] Dependent on the color shade
[2)] When combined with Hydrapid-1K-AC Primer 5404 on degreased sheet steel

Coating recommendation

Substrates[3)]	Prime coat	Intermediate coat[4)]	Top coat
Steel Preferably iron or zinc-phosphated **Non-ferrous metals galvanized steel**	Hydrapid-1K-AC Primer 5404 60–80 µm Hydrapid-1K-AC Dip Primer 5406 40–50 µm	Normally not required.	Hydrapid-1K-AC Paint 5481, 5482 40–60 µm
Steel Preferably sand-blasted (degree of cleanliness min. SA 2 ½ in accordance with DIN EN ISO 12944-4), iron or zinc-phosphated **Cast**	Hydrapid-1K-AC Primer 5404 60–80 µm Hydrapid-1K-AC Dip Primer 5406 40–50 µm	Hydrapid-1K-AC Primer 5404 60–80 µm Hydrapid-1K-AC Dip Primer 5406 40–50 µm	Hydrapid-1K-AC Paint 5481, 5482 40–60 µm

[3)] The substrate must generally be free of fats, oils, separating and drawing agents, as well as dirt and corrosion products including impurities.
[4)] For top coats in intense color shades (see Use), an additional intermediate coating in color shade RAL 9010 (approx. 40 µm) e.g. with 5482.–.9010, is required.

Use

Stir the material homogeneously before application.

Compatibility

Can only be combined with the thinners and prime coats specified in this technical data sheet.

Application temperature

≥15°C (object temperature 3°C above the dew point)

Thinning

Demi Water 5110
Stir the material homogeneously before application

Humidity

< 80% relative humidity

Application of vibrant color shades

Brilliant, vibrant color shades, especially in the yellow, orange, red, magenta and yellow-green range (see the affected RAP Classic Uni color shades below) have a low hiding power. For these color shades, we recommend applying an intermediate coat in the color shade RAL 9010 (approx. 40 µm) with 5482–9010.

Affected RAL Classic color shades:

RAL 1003	RAL 2001	RAL 3011
RAL 1004	RAL 2002	RAL 3013
RAL 1006	RAL 2003	RAL 3016
RAL 1007	RAL 2004	RAL 3018
RAL 1012	RAL 2008	RAL 3020
RAL 1016	RAL 2009	RAL 3027
RAL 1017	RAL 2010	RAL 3031
RAL 1018	RAL 2011	RAL 4002
RAL 1021	RAL 3000	RAL 4004
RAL 1023	RAL 3001	RAL 4007
RAL 1028	RAL 3002	RAL 4010
RAL 1032	RAL 3003	RAL 6018
RAL 1033	RAL 3004	RAL 6026
RAL 1037	RAL 3005	RAL 8023
RAL 2000	RAL 3007	

Application method

Application method

Air spraying, air mix spraying[5)] , airless spraying[5)]

Drying

Air drying (at +20°C, 65% relative humidity)

Dust dry after 45–60 minutes, non-sticky and recoatable after 1 to 2 hours. Fully dried after 7–10 days.

Oven drying

Maintain the flash-off time for 15–20 minutes. Afterwards stove the paint for approx. 30 minutes at an object temperature of approx. 60°C or approx. 20 minutes at an object temperature of approx. 80°C.

Thermoplastic paint system: do not expose to temperatures above 100°C

[5)] Leads to surfaces with reduced gloss

Spray data

Method	Nozzle opening	Pressure	Application consistency[7)]
Air spraying	1.2–1.7 mm	2–4 bar	20–40 sec.
Air-mix spraying[6)]	0.23–0.33 mm	80–150 bar (material) 1–3 bar (air)	45–55 sec.
Airless spraying[6)]	0.23–0.33 mm	80–150 bar (material)	45–60 sec.

[6)] Leads to surfaces with reduced gloss

[7)] Measured in a DIN 4 mm flow cup

Container sizes

25 kg.
Additional container sizes available on request.

Storage time

6 months after receipt of goods.
Store in a sealed container in a dry place and at room temperature (at most 25°C). Protect from heat sources and direct sunlight. Always keep the containers tightly sealed. Protect the contents from drying out. Dried paint residues and any surface-dried skin are insoluble in the paint and can only be removed by straining.

Minimum shelf life Refer to label

Remark

This technical data sheet is based on extensive development work and years of practical experience. Its content does not constitute a contractual legal relationship. The user/buyer is not released from the responsibility of checking our products to ensure they are suitable for the intended application. In addition, our general terms of business apply.

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