

Technical Data Sheet

Hydro 2C PUR Paint

5860 high gloss

5861 silk gloss

5862 silk matt

5863 matt

Highly weather resistant, water based two-component polyurethane paint in four gloss grades



Field of application

As a decorative high weather resistant quality perfectly suitable for instruments, automobile accessories, construction elements, construction sections (steel and aluminium), agricultural and construction machinery, fittings, furniture (indoor), garage doors, garden furniture and equipment, home appliances, medical technical equipment, shopfitting, exhibition stand construction, light fixtures, machines, motors, gears, utility vehicles, radiators, racks, switchgear cabinets, silos, steel boxes, steel cylinders, gates and fence systems, doors, frames, vending machines.

Properties

- excellent weather resistance
- excellent gloss and color stability
- good adhesion on most substrates
- permanent temperature resistance at 100 °C ¹⁾
- high mechanical resistance
- good chemical and solvent resistance
- fast drying
- high degree of stability
- easy application (air-mix and airless)
- environmentally friendly because it's water-based

Technical Data

Basis	Combination of hydroxyacrylate and aliphatic polyisocyanate
Color	All common color-systems
Gloss grade	5860 high gloss, ≥ 85 GU/60° 5861 silk gloss, 50 to 70 GU/60° 5862 silk matt 30 to 50 GU/60° 5863 matt 10 to 30 GU/60° (in accordance with DIN EN ISO 2813)

¹⁾ according to coating suggestion

Approvals/permits

ISEGA Certificate of Conformity (for contact with dry foodstuff) in combination with 2C Epoxy Primer 5706 and Hydro-2C-PUR-Paint 5860/5861, ISEGA-Forschungs- und Untersuchungsgesellschaft mbH, Aschaffenburg approval no.: 58048 U 22

Certificate of Conformity (for contact with dry foodstuff) in combination with Hydro 2C Epoxy Flexprimer 5719 and Hydro-2C-PUR-Paint 5860/5861, ISEGA-Forschungs- und Untersuchungsgesellschaft mbH, Aschaffenburg approval no.: 57056 U 22

Technical Data

Density	1.0 to 1.4 g/cm ³ ³⁾ (in accordance with DIN ISO 2811)
Flash point	Not flammable
Labeling	See current Safety Data Sheet.
Theoretical coverage	360 to 410 m ² /kg ²⁾ ³⁾ (with 1 µm dry layer)
VOC value	< 250 g/l ²⁾
Solid content	30 to 60 weight % ³⁾
Delivery viscosity at 20 °C	60 to 100 sec./DIN 4 mm
Stability	200 to 250 µm (wet film)
Outdoor weather exposure Florida (5° south)	5860: after 24 months residual gloss ≥ 80 % of initial gloss 5862: after 24 months residual gloss ≥ 80 % of initial gloss (in accordance with ISO 2810)
Accelerated weathering QUV-B/SE	5860/5861/5862: after 600 h residual gloss ≥ 90 % of initial gloss 5863: after 600 h residual gloss ≥ 80 % of initial gloss (in accordance with DIN EN ISO 16474-3)
Accelerated weathering Xenon	5860/5861/5862/5863: after 2000 h residual gloss ≥ 80 % of initial gloss (in accordance with DIN EN ISO 16474-2)
pH	7.5 to 8.0

²⁾ In mixture

³⁾ Depending on color

Coating suggestion

Substrates ⁴⁾	Prime coat	Intermediate Coat	Top coat
Steel preferably sand-blasted (degree of purity at least SA 2 ½ in accordance with DIN EN ISO 12944, Part 4), iron or zinc-phosphated. Cast iron Galvanized steel Aluminium Non-ferrous metals etc.	Hydro 2C PUR Primer 5704 40 to 60 µm	If required (specified layer thickness), a second layer can be applied using the corresponding primer. In the case of topcoats with intense color shades (see "Process"), an additional intermediate coat in RAL 9010 (approx. 40 µm) using 5862.-.9010 is required.	Hydro 2C PUR Paint 5860, 5861, 5862, 5863 40 to 60 µm
	Hydro 2C Epoxy Primer 5710 40 to 60 µm		
	Hydro 2C Epoxy Flexprimer 5719 40 to 80 µm		
	2C Epoxy Primer 5706		

⁴⁾ The substrate must generally be free of fats, oils, separating and drawing agents, as well as dirt and corrosion products including impurities.

Hardener

PUR-Hardener 5790.-.0200 (slow curing)⁵⁾
 PUR-Hardener 5790.-.0201 (fast curing)
 PUR-Hardener 5790.-.0400 (standard curing)

Basis Aliphatic polyisocyanate

Mixing ratio PUR-Hardener 5790.-.0200: 4 : 1 weight-% (3 : 1 vol.-%)
 PUR-Hardener 5790.-.0201: 5 : 1 weight-% (4 : 1 vol.-%)
 PUR-Hardener 5790.-.0400: 5 : 1 weight-% (4 : 1 vol.-%)

Shelf life 6 month after receipt.
 Store in a sealed container in a dry place and at room temperature (at most 25 °C). Protect from heat sources and direct sunlight.

Minimum shelf life refer to label

⁵⁾ The PUR-Hardener 5790.-.0200 (slow curing) is mainly suitable for forced drying at short flash-off time.

Process

Material has to be stirred until homogeneously before application.

Mixing As 2C system, the actual paint and the hardener are supplied separately and mixed homogeneously in the specified mixing ratio just before application.
 In case of manual mixing, high-speed mixing-tools are recommended to use. The formation of foam should be avoided.

Thinning Demineralised water 5110
 Disperse homogeneously by stirring.

Pot life 3 to 4 h (at 20 °C)
 With PUR-Hardener 5790.-.0201 (fast curing) 1,5 to 2,5 h (at 20 °C)

Application temperature	> 15 °C (object temperature 3 °C above dew point)
Air humidity	< 80 % relative humidity
Compatibility	Compatibility is given only in combination with the hardeners, thinners and primers mentioned in this Technical Data Sheet.
Use of intense color shades	Brilliant intense color shades, particularly in the yellow, orange, red, magenta and yellow-green ranges (relevant RAL Classic Uni-Color shades see below) have a lower covering capacity. With these color shades, we recommend applying a intermediate coat in RAL 9010 (approx. 40 µm) using 5862.-.9010.

Process

Affected RAL Classic color shades:

RAL 1003 RAL 2002 RAL 3013
 RAL 1004 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
 RAL 2001 RAL 3011

Application Air spraying, air-mix spraying, airless spraying, electrostatic spraying (high speed rotation atomising bells/discs)

Curing conditions

drying	To obtain optimum coating-properties, accelerated drying is recommended.
Air drying⁶⁾ (at + 20 °C, 65 % r. h.)	Dust-dry after approx. 60 minutes, non-sticky after 2 to 3 hours (of shortening of non-sticky a forced drying is recommended). Dry after 24 to 48 hours. Fully cured after 10 to 14 days.
Re-Working	Ready for re-working after 24 hours. To obtain an good adhesion for overcoating it is recommended that 5860, 5861 and 5862 surfaces are sanded before.
Oven-drying	Keep the flash-off time for 30 to 45 minutes. Afterwards stoving the paint for approx. 45 minutes at an object temperature of 60 °C.

⁶⁾ The drying parameters refer to PUR-Hardener 5790.-.0400

Application spray data

Process	Nozzle	Pressure	Application viscosity ⁷⁾
Air spraying	1.3 to 1.7 mm	2 to 3 bar	20 to 35 sec.
Air-mix spraying	0.23 to 0.33 mm	80 to 150 bar (material) 1 to 3 bar (air)	45 to 55 sec.
Airless spraying	0.23 to 0.33 mm	120 to 180 bar (material)	45 to 60 sec.

Process	Speed	High voltage	Application viscosity ⁷⁾
Electrostatic (high speed rotation atomising bells/discs)	25 to 30 per mil rotation/minutes	70 to 80 kV	20 to 30 sec.

⁷⁾ measured in DIN 4 mm flow cup (in mixture).

Container sizes

25 kg
In Quick-Delivery Service: 2,5kg, 10 kg
Further container sizes available upon request.

Shelf life

6 months after receipt.
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 surface drying and drying out. Dried paint residues and surface-dried skin are insoluble in paint and can only be removed by sieving.

Minimum shelf life refer to label

Remark

This Technical Data Sheet is based on intense development work and many years of practical experience. The contents do not constitute any contractual relationship. The user/buyer is not released from his/her obligation to test our products for suitability for the intended application. In addition, our General Terms and Conditions shall apply.

As soon as a new edition of this Technical Data Sheet is issued, the previous specifications become invalid.
If you need the current version, please contact your Brillux consultant, Version 22.

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