TECHNICAL DATA SHEET

E20190104

ARCHITIZER+ AWARD
WINNER

THE COOLEST WHITE

FLUOROPOLYMER COATING SYSTEM
DESIGNED BY BEN VAN BERKEL / UNSTUDIO

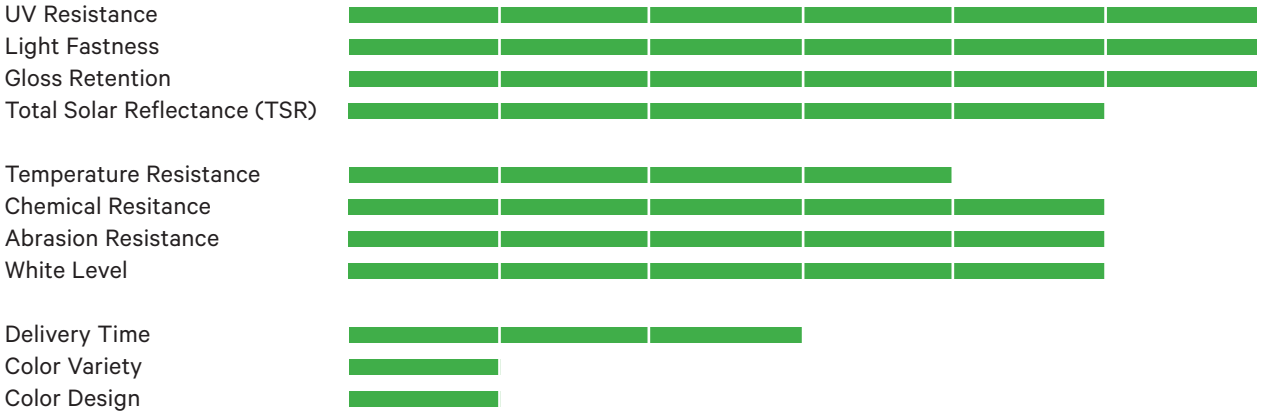
DUTCH DESIGN AWARD
NOMINEE

Ultradurable white fluoropolymer coating system for exterior applications like façades with very high total solar reflectance (TSR) and excellent abrasion resistance. Thanks to the high TSR the substrate heats-up less and radiates less heat. The Coolest White is an active contribution against the Urban Heat Island Effect by reducing the temperature of the environment and inside buildings.

Application

Substrate	☑ Steel ☑ Aluminium
Application method	☑ Coil Coating ☑ Spraying ☑ Rolling/Brushing ☑ Aerosol Cans for Touch-up
Task	☑ Exterior
Tests	☑ UV-Resistance ☑ TSR ☑ Abrasion Resistance

Performance



Setup	Steel Spraying & Rolling	Coil Coating	Aluminium Spraying & Rolling	Coil Coating
Primer	1 x 60–120 µm Duopol Steelguard C80	1 x 6 µm Armidur CC L150	–	1 x 6 µm Armidur CC L150
Topcoat	1 x 40–60 µm Vernidur FP31	1 x 22±2 µm Vernicron CC FP L131	1 x 40–50 µm Vernicron FP L451	1 x 22±2 µm Vernicron CC FP L131
Clearcoat	1 x 20 µm Vernidur FP35	1 x 12±2 µm Vernicron CC FP L135	1 x 20 µm Vernicron FP L455	1 x 12±2 µm Vernicron CC FP L135
TSR*	~ 88	~ 82	~ 88	~ 82

* Testing Report Q1056 & Q1108 by SAMCoat, Belgium

MONOPOL
COLORS

www.coolestwhite.com
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Binder Fluoropolymer

Gloss @ 60 ° 30 ± 5 U

Color Coolest White (L-Value ~ 96)

Substrate

Aluminium (Outdoor): Cleaning and pre-treatment according to DIN EN 12487. The substrate must be free of oxidation products, tinder, oil, grease or residues of release agents.
Old coatings: After appropriate compatibility and adhesion tests.
Ferrous metals: blasting according to ISO 8501-1 Sa 2 ½. The substrate has to be dry and free of grease and dust.

	Steel Spraying/Rolling			**Aluminium + Steel Coil Coating**			**Aluminium Spray/Rolling**	
	Duopol Steelguard C80	Vernidur FP31	Vernidur FP35	Armidur CC L150	Vernicron CC FP L131	Vernicron CC FP L135	Vernicron FP L451	Vernicron FP L455
Thinner The use of different thinners may lead to defects and loss of quality.	V2	V109* for spraying V119* for rolling/brushing V139 summer thinner for rolling/brushing * also eletecrostat. application	V109* for spraying V119* for rolling/brushing V139 summer thinner for rolling/brushing * also eletecrostat. application	V48 or Solvesso 150	V48 or Solvesso 150	V48 or Solvesso 150	V109, V119	V109, V119
Components	2	2	2	1	1	1	1	1
Packaging Pigment Hardener	10 / 20 kg 1 / 2 kg	10 / 20 kg 1 / 2 kg	10 / 20 kg 2 / 4 kg	200 - 220 kg barrels	200 - 220 kg barrels	200 - 220 kg barrels	200 - 220 kg barrels	200 - 220 kg barrels
Mixing Ratio	10:1 by weight	10:1 by weight	5:1 by weight					
Hardener	H80	H300	H300					
Potlife	2 hrs. @ 20 °C	2 hrs. @ 20 °C	2 hrs. @ 20 °C					
Drying @ 20 °C Air drying types Dust free Dry to touch Recoatable Thoroughly dry Drying times depend on film thickness, substrate and air temperatures.	after 1 hr. after 2 ½ hrs.	after 30 min. after 3 hrs. after 2 ½ hrs. overnight	after 30 min. after 3 hrs. overnight					
Forced drying Full resilience is achieved after 10 days.	after ~ 30 min. flash-off 1 hr. @ 80 °C	after ~ 30 min. flash-off 1 hr. @ 80 °C	after ~ 30 min. flash-off 1 hr. @ 80 °C					
Drying stoving types PMT Dwell time				216 - 224 °C 60 sec.	199 - 209 °C 30 - 45 sec.	243 - 249 °C 30 - 45 sec.	Flash-off min. 20 min.: 160 °C - 30 min. to max 60 min. 180 °C - 10 min. to max 30 min.	Flash-off min. 20 min.: 160 °C 30 min. to max 60 min. 180 °C 10 min. to max 30 min.
Storage In original, unopened containers not exposed to direct sunlight and heat.	12 months	Resin 12 months Hardener 6 months	Resin 12 months Hardener 6 months	6 months	6 months	6 months	6 months	6 months
Table Solids content by weight (ca.) Solids content by volume (ca.) Density (20°C) Dry film thickness Theoretical coverage	85% 70% 1.56 kg/l 60 µm 8 m^2/kg	74% 56% 1.49 kg/l 40 µm 10 m^2/kg	67% 59% 1.10 kg/l 20 µm 27 m^2/kg	57% 45% 1.15 kg/l 6 µm 66 m^2/kg	62% 48% 1.22 kg/l 22 µm 18 m^2/kg	55% 46% 1.07 kg/l 12 µm 37 m^2/kg	66% 49% 1.32 kg/l 40 µm 10 m^2/kg	57% 47% 1.08 kg/l 20 µm 22 m^2/kg

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COOL DOWN THE PLANET WITH PAINT!

Description
High performance coating system based on the latest fluoropolymer technology. Thanks to a molecular structure comparable to Teflon®, it provides a protective coating with exceptional good weather resistance, color and gloss retention as well as abrasion resistance. This high-quality and long-lasting fluoropolymer coating system is especially designed for applications required to satisfy the highest demands.

Area of Application
Cool down the planet with paint: The Coolest White reduces the heating of coated substrates. Therefore heating of the interior of buildings is moderated as well as heat reflectance to the environment, helping to counteract the Urban Heat Island Effect. The Coolest White is a multilayered coating system for high-quality metallic façade elements and steel structures made of aluminium, steel, GRP etc. such as industrial and commercial buildings, shopping centers, petrol stations, bridges, overpasses, industrial OEM-coatings, etc.

Cleaning and Graffiti Removal
Thanks to the easy-to-clean properties of The Coolest White, the result is strong dirt repellence with low maintenance costs and long cleaning intervals. Most marks (such as graffiti) can be removed completely. For this purpose, we recommend the use of IFO-certified Monoclean X500 Graffiti Remover/Monoclean X510 Cleaning Agent.

Special Notes
H300 Hardener is moisture-sensitive. Our indications are based on a dry film thickness of ca. 60 µm for primers and ca. 40 µm for finishing coats, normal climate 23/50. The information contained in this technical data sheet is based on general technical standards and is intended for specialists. Any changes in the recommended operating procedures or specified environmental conditions may significantly influence the results. Our guarantee covers only the quality of the material supplied. We do not accept any responsibility for the application. In case of doubt, we recommend contacting our Technical Service. Our products are under constant development. Therefore please note date of issue of our technical data sheet and request the latest edition.

Waste Disposal
Residues and expired material must be taken to the toxic waste disposal unit.

Safety Measures
The Coolest White contains solvents and is combustible, and must therefore be protected from heat and kept away from naked flames. Ensure that ventilation is adequate and do not inhale vapours. All regulations regarding work hygiene and operational measures must be observed.

Method of application	Thinner (approx.)	Nozzle	Viscosity @ DIN4
Brushing/Rolling	5 - 15 %	short-fibre roller	45“ ± 5“
Gravity cup gun	15 - 20 %	1.6 - 1.8 mm	25“ ± 5“
Double diaphragm pump	10 - 15 %	1.4 - 1.6 mm	35“ ± 5“
Airmix/Airless	10 - 15 %	10/40	35“ ± 5“
Coil Coating			100 ± 5“

Do not apply at temperatures below + 5 °C. The surface temperature must be at least 3 °C above dew point, in order to avoid condensation during the application.

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