IPS 100

Inorganic Polysiloxane 100% solids

Technical Data Sheet rev 07.16 (EN, EU)

Product Description

IPS 100 is a single component, ambient curing, inorganic polysiloxane finish. High performance novel technology which is solvent free (100% solids) coating. Fully inorganic chemistry provides outstanding resistance to UV degradation & tough environmental conditions. IPS 100 coating has environmentally friendly properties including ultra-low VOC level and an amine, isocyanate, tin & heavy metal free formulation.

Curing from ambient conditions to a hard & durable finish. IPS 100 has unique novel inorganic chemistry resulting in ultra-high UV resistance, low dirt pick up, anti-graffiti properties & easy maintenance with single pack technology. IPS 100 is formulated to provide colour finishes which are superior performing in gloss & colour retention resulting in high levels of resistance to severe weather conditions without degradation.

Intended Applications

For use in high performance industrial & commercial constructions where aesthetical importance is a factor. Application over suitability prepared inorganic zinc (IOZ) primers, hot dip galvanised, DTM and epoxy hybrid anti-corrosion primers & intermediates. Contact the Performance Polymers technical department for compatibility of such primers & intermediate coatings systems.

Technical Information

Product chemistry
A single component, ambient curing, polysiloxane

Colour
RAL colours

Gloss
Various range available

Theoretical spreading rate
13.33 m^2/l at 75µm DFT

Typical film thickness
75 – 150µm DFT per coat

Application methods
Airless, airspray and brush & roller

Volume solids
100%

VOC
Solvent free

Specific gravity
Approx. 1.34 g/ml
(Colour dependant)

Flashpoint (ISO 1523)
N/A

Temperature resistance
180°C

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Surface Preparation

Substrates must be clean, dry and free from any contamination. All oil, dirt, grease, dust, foreign material and loose rust must be removed prior to coating.

Carbon steel substrates

Always apply IPS 100 over suitable primed surfaces, an anti-corrosion primer should be used in accordance with Performance Polymers recommendation. The primer surface must be clean and free from contamination, ensuring application is within the maximum overcoating time stated on the technical data sheet of the specific primer coating.

Inorganic zinc primed substrates

Inorganic zinc (IOZ) primer overcoating; prior to application ensure primer surface is clean and free from contamination including zinc salts. The primer must be fully cured, an MEK rub test in accordance with the local standard is highly recommended.

Hot dip galvanized overcoating; prior to application remove all sharp edges, runs & drips by grinding or filing followed by abrasive sweep with a non-metallic abrasive media to create a surface profile (R_z) >25µm. For highly corrosive environments eg coastal, C5 or C4 a primer is recommended.

Aluminium and stainless steel substrates

Use an abrasive sweep with a non-metallic chloride free abrasive media to create a surface profile (R_z) >25µm.

Substrate Temperature

Substrate temperature should remain between 10 to 50°C and remain 3°C above the dew point during application. Product application conditions range from 10 to 50°C & 30 - 85% relative humidity. Higher or lower temperatures & humidity's will result in faster or slower curing respectively.

System Specifications

IPS 100 is to be used as a finish coat over suitably primed substrates or DTM (aluminium and stainless steel), suitable primers include:

1. **Inorganic zinc (IOZ) primers**
2. **Epoxy hybrid anti-corrosion primers**
3. **Hot dip galvanized**

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Typical 2 or 3 coat system for high performance industrial or commercial application:

- Anti-corrosion primer: 75 - 200 DFT
- Intermediate coat: 100 - 150 DFT (specification dependent)
- IPS 100: 75 - 150µm DFT

Application of IPS 100 by airless or airspray are the preferred application methods when applied over suitably primed substrates. Applications of 2 or 3 coat systems will depend on requirements needed from the protective coating system. Please consult Performance Polymers for further information on coating specifications.

Application

Airless

Pump: 30:1 or larger

Tip size: 0.012 - 0.017 inch

Pressure: 1741 - 2321 psi / 120 - 160 bar

Thinning:
Not recommended

Airspray (conventional)

Pressure: 30 - 40 psi / 2.1 - 2.8 bar

Nozzle orifice: 1.8 - 2.2mm

Thinning:
Not recommended

Brush/roller

Thinning:
Not recommended

Multiple application coats maybe necessary to ensure 75 - 150µm DFT is reached.

Mixing

IPS 100 is a single component product, settling can occur during transport & storage. The material should always be mixed using a mechanical agitation ensuring all settled-out pigments are dispersed until a uniform consistency is reached.

Reactivity

IPS 100 is reactive with moisture, skinning can occur once opened and atmospherically exposed. To prevent skinning keep covered at all times.

Reducer

Product is application ready and does not require thinning. In exceptional circumstances thinning maybe used upon application to hot substrates (50 - 130°C) in such a case consult Performance Polymers.

Clean up

Use Thinner X21 for cleaning after product use. Ensuring all material is flushed from application equipment.

Packaging

5 litres, 7.31 kg per can
(Colour dependant)

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Coating & Curing Schedule

Spreading rate information

DFT	*Theoretical spreading rate*
75	13.3 m^2/l
150	6.67 m^2/l

Film thickness information

DFT/WFT	Minimum (µm)	Maximum (µm)
Dry film thickness	*75*	*150*
Wet film thickness	*75*	*150*

Drying & recoating information

Temperature (°C)	Touch dry	Overcoating time	Dry to handle
10	40 - 60 minutes	8 - 16 hours	36 - 42 hours
23	15 - 30 minutes	5 - 6 hours	16 - 24 hours
38	5 - 10 minutes	1 - 2 hours	12 - 16 hours

Notes: drying times can vary upon different environmental conditions. Coating should be applied within the information supplied to ensure drying & overcoating times are not affected. Product is fully cured from ambient conditions & does **not** require heating to obtain mechanical & UV protection.

Additional Information

Safety precautions

This product is for use only by professional applicators in accordance with information in this Technical Data Sheet (TDS) and the applicable Material Safety Data Sheet (MSDS). Refer to the product MSDS before using this material. All usage of this product must be kept in compliance with local, health, safety & environmental conditions & regulations.

Storage & shelf life

Material should be stored in a dry, shaded environment away from heat & ignition sources. Shelf life is minimum 12 months at 23°C.

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