

PRODUCT CODE: C220021

POLYPLEX ISO-NPG SOLID SURFACE RESIN is a high performance, low colour, medium reactivity casting resin based on Isophthalic Acid and Neopentyl Glycol. POLYPLEX ISO-NPG SOLID SURFACE RESIN is pre-promoted for room temperature cure with Methyl Ethyl Ketone Peroxide initiators.

POLYPLEX ISO-NPG SOLID SURFACE RESIN is intended for production of solid surface castings for domestic work surfaces and sanitary-ware. The use of vacuum to remove air bubbles from the mix, and post-cure stoving of castings, is recommended to optimise stain resistance and mechanical properties.

FEATURES

- Isophthalic/Neopentyl Glycol based resin.
- Specially formulated promoter system.
- Contains UV light stabilizer.

BENEFITS

- Minimal bleaching after prolonged water exposure. Good stain resistance. Superior resistance to thermal shock.
- Low cast colour, minimal gel and cure time drift.
- Colour change in castings exposed to UB light is minimised.

ADDITIONAL INFORMATION

The types of filler used can have major effects on the colour, stain and thermal shock resistance of castings. Commonly used fillers include Alumina Trihydrate and Calcium Carbonate.

Some grades of filler may affect the gel and cure properties of the resin more than others due to differences in particle size or impurity levels. Therefore tests should be carried out to confirm the suitability of any particular grade.

While this resin utilises a high performance unsaturated polyester based on Isophthalic acid & Neopentyl Glycol, and a UV stabilizer to improve UV resistance to discolouration - castings must be properly cured to achieve optimum stain, chemical and UV resistance properties.

TYPICAL LIQUID RESIN PROPERTIES

PROPERTY	TYPICAL VALUE	TEST DETAILS
Appearance	Clear Liquid	
Viscosity	800 – 1000 cP	Brookfield RVT sp.3/100rpm
Geltime	15-20 minutes (Summer) 10–15 minutes (Winter)	1% MEKP Interlox NR20
Density	1.10 gcm ⁻³	
Flash Point	31°C	Setaflash
Shelf Life	6 months	When stored in original closed container in the shade

Typical values: Based on materials tested in our laboratories, but varies from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

TYPICAL CAST UNFILLED RESIN PROPERTIES

PROPERTY	TYPICAL VALUE	TEST DETAILS
Hardness	45	Barcol (GYZ 934-1) EN 59
Density	1.19 gcm ⁻³	ISO R1183
Volume Shrinkage	7 – 8%	ISO 3521
Tensile Strength	55 MPa	ISO R527
Flexural Strength	105 MPa	ISO 178
Flexural Modulus	3500 MPa	ISO 178
Elongation at break	1.5 – 2.0%	ISO R527
Heat Deflection	85 - 90°C	ISO 175 (1.8 MPa)

Cast resin was prepared as laid down in BS 3532 using 1% MEKP. Cured at room temperature for sixteen hours then post cured for two hours at 80°C followed by two hours at 100°C.

STORAGE AND HANDLING

To ensure maximum stability and maintain optimum resin handling properties, polyester resins should be stored in closed containers, away from heat sources and sunlight. The resin should be stored away from all sources of ignition. Stored resin quantities should be kept to a reasonable minimum and used on a first in/first out stock rotation basis. Prolonged storage, or unfavourable storing conditions, may cause separation, therefore agitation of the resin before use is recommended.

STANDARD PACKAGING

Mild steel drums (225kg)

Always refer to the MSDS before use