

## TECHNICAL DATA SHEET (TDS)

**Product:** PVC Compound – Electrical Plug Range

**Manufacturer:** Pragya Polymers

**Grade:** EP-P95 – Premium

**Application:** Injection Moulded Electrical Plugs, Sockets & Fittings

### Product Overview

A high-performance rigid PVC injection moulding compound engineered for critical electrical plug and socket applications. Delivers outstanding flame retardancy, superior dimensional stability, excellent surface aesthetics, and consistent dielectric properties — suitable for BIS-marked and export-grade electrical fittings.

Property	Test Method	Typical Value	Unit
Density @ 23°C	ASTM D792	1.42 ±0.02	g/cm <sup>3</sup>
Hardness	ASTM D2240	95 ±3	Shore A
Tensile Strength	IS 10810 / ASTM D638	≥42	MPa
Elongation at Break	IS 10810 / ASTM D638	≥80	%
Flexural Modulus	ASTM D790	≥2800	MPa
Izod Impact (notched)	ASTM D256	≥4.0	kJ/m <sup>2</sup>
Heat Distortion Temp (0.45 MPa)	ASTM D648	≥65	°C
Volume Resistivity	IEC 60093	≥10 <sup>13</sup>	Ω·cm
Dielectric Strength	IEC 60243-1	≥20	kV/mm
Flammability	UL-94	V-0	–
Glow Wire Temperature	IEC 60695-2-12	≥850	°C
MFI (190°C / 21.6 kg)	ISO 1133	10–25	g/10 min
Gel Count (≥0.5 mm)	Internal	≤5	per 100 cm <sup>2</sup>
Moisture Content	Karl Fischer	≤0.10	%

### Processing Guide

Injection moulding: Melt temperature 175–195°C; Mould temperature 25–45°C; Injection pressure 80–120 MPa; Back pressure 5–10 MPa. Screw compression ratio 2.0–2.5:1. Ensure adequate venting for chlorine off-gases. Pre-drying: 75°C for 2h if humidity >60% RH. Material is Ca/Zn stabilised — no additional stabiliser required.

### Compliance & Disclaimer

*Lead-free and Cadmium-free. Compliant with IS 10810 test methods for PVC insulation and sheathing compounds. RoHS 2011/65/EU. Halogen content from PVC resin only — no added chlorinated flame retardants. Suitable for BIS-marked electrical fittings. Typical values are indicative and not specifications. Customer validation required.*