

TECHNICAL DATA SHEET (TDS)

Product: PVC Compound – Footwear Range

Manufacturer: Pragya Polymers

Grade: FW-P65 – Premium

Application: Injection Moulded Shoe Soles, Safety Footwear & High-Performance Sandals

Product Overview

A premium flexible PVC compound for high-performance injection moulded shoe soles and safety footwear. Formulated for excellent abrasion resistance, superior flex fatigue life, low-temperature flexibility, and consistent colour — meeting the requirements of branded footwear manufacturers and safety shoe OEMs.

Property	Test Method	Typical Value	Unit
Density @ 23°C	ASTM D792	1.22 ±0.02	g/cm ³
Hardness	ASTM D2240	65 ±3	Shore A
Tensile Strength	IS 3400 / ASTM D412	≥12.0	MPa
Elongation at Break	IS 3400 / ASTM D412	≥350	%
Tear Strength	ASTM D624 Die C	≥30	kN/m
Abrasion (DIN 53516)	DIN 53516	≤120	mm ³
Flex Fatigue (Ross Flex)	ASTM D1052	≥100,000 cycles (no crack)	–
Cold Flex Temperature	ASTM D1790	≤ -20	°C
Compression Set (22h @ 70°C)	ASTM D395	≤35	%
Slip Resistance (wet)	EN ISO 13287	SRC rated	–
Colour Fastness (rub)	ISO 105-X12	Rating ≥4	–
MFI (190°C / 10 kg)	ISO 1133	4–12	g/10 min
Bloom / Migration	Visual (70°C×7d)	None	–

Processing Guide

Injection moulding: Melt temperature 160–178°C; Mould temperature 20–35°C; Injection pressure 60–100 MPa. Screw compression ratio 2.5–3:1. Rotary table or vertical injection machines suitable. No pre-drying required if stored in sealed bags <6 months. Pigment masterbatch compatible — add at max 3 phr to maintain properties.

Compliance & Disclaimer

Lead-free, phthalate-screened formulation (DINP/DIDP per REACH Annex XVII). RoHS and REACH compliant. Azo dye free. Suitable for direct skin contact applications as per applicable regulations. Typical values are indicative only and not specifications. Customer validation required for specific safety footwear certification.