

Polarex Antimicrobial

Polarex Antimicrobial is an extruded semi-rigid PVC (PVC-U) Hygienic Wall Cladding sheet that is combined with an antimicrobial active component that has been tested according to the international standard ISO 22196-2011 by an independent laboratory of MRSA and Escherichia Coli as well as Staphylococcus Aureus, the results show a bacteria reduction of up to 99.99%. It contains no plasticisers, no fillers and displays normal impact strength. The sheet materials correspond to the following moulding compound: ISO 1163-1 – PVC-U, EC, 074 – 05 – T28. They conform to fire regulations of the BS476: Part 7: 1997 and achieved Class 1 through-out a variety of tests. The semi-finished materials are free from blisters, voids and are perfectly homogenous.

Product Features

Attribute	Value
Density	ISO 1183 (DIN 53479) g/cm ³ ≈ 1,41
Tensile stress at Yield	DIN EN ISO 527 (DIN 53 455) N/mm ² 45
Elongation at break	DIN EN ISO 527 (DIN 53 455) % 20
Modulus of elasticity	ISO 572-2 (DIN 53 457) N/mm ² 2500
Compression Strength	ISO 3605 (DIN 53 454) N/mm ² 65
Stress at 3,5% Strain	ISO 178 (DIN 53 452) N/mm ² 60
Impact Strength	DIN EN ISO 179 (DIN 54 453) kJ/m ² no rupture at 0°C
Notch Impact Strength	DIN EN ISO 179 (DIN 53 453) kJ/m ² 6
Ball-Pressure Hardness	ISO 2039 (DIN 53 456) N/mm ² ≈ 110
Shore Hardness D	DIN 53 505
Vicat Softening Temperature	DIN EN ISO 306 °C 75
Heat Distortion Temperature	DIN EN ISO 75 °C ≈ 70
Coefficient of linear expansion	DIN 53 752 K ⁻¹ ≈ 70.10 ⁻⁶
Thermal Conductivity at 20°C	DIN 52 616 W/(m.K)
Volumeresistivity	DIN IEC 60093 VDE 0303-30 Ω.cm >10 ¹⁵
Surface Resistivity	DIN IEC 60093 VDE 0303-30 Ω.cm >10 ¹³
Relative Dielectric Constant	DIN 53 483 VDE 0303 Part 4 ≈ 3,2
Dielectric Loss Factor Tan	DIN 53 483 VDE 0303 Part 4 ≈ 0,02
Glow-wire test	VDE 0471 / 2-1, DIN IEC 695 / 2-1
Incandescence Bar Test	DIB VDE 0304 Part 3, IEC 707
Track Resistance	DIN IEC 112 / VDE 0303 Part 1 600
Breakdown Voltage	DIN 53481 / VDE 0303 Part 2 KV/mm ≤ 12
Arc Resistance	DIN 53484 / VDE 0303 Part 5
Water Absorption	DIN 53 495 / ISO 62 mg/cm ³ ≤ 3
Temperature Range for Application	-15 to 60°C
Weather Stability	DIN 53 387 DIN EN 20105-A02 Grey Scale Class 4 – 3
Physiological indifference	No
Fire Behaviour	DIN 4102 (D) B2

The physical data given in the table were determined on the test specimens under defined conditions and represent averages values from a relatively large number of measurements. The values measured on test specimens can't be used without restriction for a prediction of the properties of finished articles, since processing and shaping have an influence on the properties.