



RAU-PVC 1506/1566
Material Data Sheet AV0043 EN

RAU-PVC 1506/1566

Rigid polyvinyl chloride, impact-resistant

Chemical composition

RAU-PVC 1506/1566 is a plasticiser-free, impact-resistant, modified polyvinyl chloride made from processed recycled materials.

Identifying properties

RAU-PVC 1506/1566 has a good level of impact resistance even at low temperatures. The material is intended for use as a profile core.

Thermal properties

(see also table 1)

RAU-PVC 1506/1566 is a thermoplastic resin. Thus, the physical values alter in various temperature ranges.

If not specified otherwise, the strength values specified in table 1 apply at a temperature of 23 °C. If the temperature decreases, impact resistance and elongation at break decrease, and the material's flexural and compressive strength increases. In contrast, if temperatures increase, the elongation at break increases and the flexural and compressive strength decreases.

Mechanical properties

(See table 2)

Chemical resistance

RAU-PVC 1506/1566 is resistant to diluted and concentrated, but not oxidising, acids as well as lyes, mineral oils, vegetable oils, paraffin oils, alcohols, benzene, aliphatic hydrocarbons and higher fatty acids. Ketones, esters, chlorinated hydrocarbons, aromatic hydrocarbons, carbon disulphides and other solvents cause swelling or decomposition.

Weather-resistance and durability

The material is intended for use as a profile core and is always used with a top coat of fresh material from RAU-PVC 1406, that has excellent weather-resistance and durability.

Burning behaviour

RAU-PVC 1506/1566 extinguishes itself once the flames have been extinguished.

Physiological characteristics

RAU-PVC 1506/1566 is not intended for direct contact with food or for medical applications.

Welding

RAU-PVC 1506/1566 can be welded to itself easily. The following processes can be used for welding: Welding with welding wedge, heated tool welding, welding with nitrogen, hot gas welding, and friction and high-frequency welding.

Application

RAU-PVC 1506/1566 is resistant to deformation and can be processed in a variety of ways, meaning that it has an array of applications, e.g. in the building trade for window construction.

Recyclability

RAU-PVC 1506/1566 is suitable for re-processing and re-use in the manufacture of new products as can, theoretically, all other thermoplastic polymers.

Physical properties of RAU-PVC 1506/1566

Table 1:
Thermal properties

Properties	Test methods	Unit	RAU-PVC 1506/1566
Vicat softening temperature (process B 50)	ISO 306	°C	≥ 78
Thermal conductivity (20 °C)	ISO 8302	W/mK	Approx. 0.17
Fire behaviour (entire profile with top coat from fresh material)	DIN EN 13501-1		E
Coefficient of linear thermal expansion	ISO 11359	K ⁻¹	0.8 × 10 ⁻⁴
Specific heat capacity	ISO 11357	kJ/kgK	Approx. 1.05

Table 2:
Mechanical properties

(at 23 °C if not specified otherwise)

Properties	Test methods	Unit	RAU-PVC 1506/1566	
Density	ISO 1183	g/cm ³	1.4 to 1.5	
Tensile strength	ISO 527	N/mm ²	> 38	
Elongation at break	ISO 527	%	> 80	
Yield stress	ISO 527	N/mm ²	> 35	
Bending stress limit	ISO 178	N/mm ²	> 75	
Impact resistance	ISO 179-1, 1eU	0 °C	kJ/m ²	without breaking
		-20 °C	kJ/m ²	without breaking
Notch impact strength (on coextruded profile)	ISO 179-1, 1eA	kJ/m ²	> 20	
Ball indentation hardness 30 sec	ISO 2039	N/mm ²	Approx. 95	
Flexural modulus	ISO 178	N/mm ²	> 2000	
Shore hardness D	DIN 53505		81 ± 3	

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