

protex[®]

Bioresoluble mineral wool for high-temperature applications

PRODUCT DESCRIPTION

Bio-soluble mineral wool with organic binding agent and water repellent, available in rolls and cut-to-size pieces for individual processing in thermoset processes. Its excellent thermal insulation properties make **protex[®]** ideal for applications in the field of thermal shielding, e.g. to comply with legal requirements regarding battery safety and the safety of power electronics in battery electric vehicles (BEVs). The shape, binder content, grammage, and packaging can be adjusted according to the type of application and requirements. In addition, **protex[®]** can be easily combined with protective covering materials (films).

TECHNICAL SPECIFICATIONS

Material	Mineralwolle aus biolöslichen Fasern	Fasonaire [mmWs] (PA-35-BO) ^[1]	170 ± 30
Colour	natur	Bulk density [kg/m³]	0,25 – 0,9
Filament structure	amorph	Grammage [kg/m²] (ISO 9073-1)	0,8 – 4,0
Temperature stability (PA-70-08-BO) ^[1]	800°C/ 5 min	Binder content^[2] [%]	Max. 10
Transformation temperature [°C] (DIN ISO 7884-8)	654	ignition loss / LOI [%] (PA-38-BO, based on ISO 1887) ^[1]	6 ± 2
Biopersistence of the fiber (half-life) ^[3]	≤ 40 Tage	Acid resistance [%] Test conditions: 16% HCl 23°C 10min Test conditions: 16% HCl 23°C 240h	> 99,0 > 98,0
Melting bead content [%] (PA-07-BO) ^[1]	≤ 20	Storage stability of binding agents (from production date)	Max. 6 Wochen
Burn rate [mm/min] (ISO 3795)	0	Roll width [mm] Wheel diameter [mm]	Max. 1300 Max. 900
Water absorption capacity	low	Water absorption [%] 1h water storage / 48h drying	0,45

COMPOSITION OF THE FIBER	SiO ₂	CaO + MgO	Al ₂ O ₃	K ₂ O + Na ₂ O	Fe ₂ O ₃	MnO
by weight [%]	60,2 ± 2	28,1 ± 2	1,1 ± 1	5,0 ± 1,5	5,5 ± 1,5	≤ 1,1

THERMAL CONDUCTIVITY ASTM C201	[°C]	50	100	200	300	400	500
Density 110kg/m³, Fas. 140	[W/mK]	0,028	0,034	0,049	0,071	0,101	0,140

The maximum application temperature is 654 °C, and can be higher for short periods. The above information does not constitute a guarantee of properties. Suitability for the intended use must be checked. Subject to change without notice. The values and specifications listed are subject to manufacturing and process-related fluctuations; exact tolerances are available on request. The terms and conditions of the valid protex[®] product specification apply.

[1] Internal DBW test specifications.

[2] The binder content can also be adjusted for specific applications within a range of 0% to 10%, with a corresponding increase in LOI.

[3] Safety for the environment and health: The mineral fiber biosil[®] meets the requirements of Note Q of EU Regulation EC/1272/2008 (CLP). The half-life of biopersistence is < 40 days (intratracheal biopersistence test).