Product Information

ROHACELL® RIST/RIST-HT

FOAM FOR VACUUM INFUSION PROCESSES

ROHACELL® RIST/RIST-HT (heat treated) is closed-cell rigid foam based on polymethacrylimide (PMI) chemistry that is completely free of CFC's and specially developed for use as a structural core in connection with vacuum infusion processes (RIST = **R**esin **I**nfusion **ST**ructural). All RIST-HT products are heat-treated before delivery to customers.

RIST/ RIST-HT is engineered to meet demanding requirements from aerospace industry and has led to many specifications for more than 20 years, including MIL-PRF-46194A, WL 5.1461 and others.

Its mechanical and thermomechanical properties are like those of ROHACELL® WF/WF-HT. Its cell size, however, represents an optimal compromise between low resin uptake – about 50% less than for ROHACELL® WF/WF-HT – and satisfactory bonding of the facings to the core.

PROCESSING AND PRODUCTION

The optimized cell structure of **ROHACELL® RIST/RIST-HT** makes it particularly suitable for vacuum infusion and RTM processes, where it can be used at temperatures up to 180 °C (356 °F) with pressures up to 0.7 MPa (102 psi) as HT version.

THERMOFORMING AND SHAPING

ROHACELL® RIST/ RIST-HT can be easily thermoformed or CNC machined to meet customer requirements.
High precision, pre-shaped and ready-to-use foam cores in complex or simple geometries can also be supplied by EVONIK.

Property	Test Method	Unit	ROHACELL® 51 RIST	ROHACELL® 71 RIST	ROHACELL® 110 RIST
Density	ISO 845 ASTM D 1622	kg/m³ lbs/ft³	52 (40) 3.25	75 (60) 4.68	110 (89) 6.87
Compressive Strength	ISO 844 ASTM D 1621	MPa psi	0.8 (0.4) 116	1.7 (1.1) 246	3.6 (2.2) 522
Tensile Strength	ISO 527-2 ASTM D 638	MPa psi	1.6 (0.9) 232	2.2 (1.57) 319	3.7 (2.54) 536
Tensile Modulus	ISO 527-2 ASTM D 638	MPa psi	75 (45) 10,875	105 (75) 15,225	180 (135) 26,100
Nom. Elongation at Break	ISO 527-2 ASTM D 638	%	3	3	3
Shear Strength	DIN 53294 ASTM C 273	MPa psi	0.8 (0.5) 116	1.3 (1.0) 188	2.4 (1.8) 348
Shear Modulus	DIN 53294 ASTM C 273	MPa psi	24 (14) 3,480	42 (24) 6,090	70 (40) 10,170
Coefficient of Thermal Expansion	ISO 11359-1/-2	1/K*10E-5	3.3	3.4	3.4
Compressive Creep Resistance ≤ 4 % for Non-HT Material	Temperature Pressure Time	°C MPa h	130 0.2 2	130 0.3 2	130 0.4 4
Compressive Creep Resistance ≤ 4 % for HT Material	Temperature Pressure Time	°C MPa h	180 0.35 2	180 0.5 2	180 0.7 2

Technical data of our products are typical values for nominal density and minimum values in (). All ROHACELL® products are closed-cell rigid foams based on polymethacrylimide (PMI) chemistry and contain no CFC's.

FOR MORE INFORMATION

If you have questions or would like to discuss using **ROHACELL® RIST/RIST-HT** in your application, we encourage you to talk with your local ROHACELL® representative.

Visit www.performance-foams.evonik.com to locate and directly connect with the contact in your region, by phone or email.

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