ROHACELL®

Product Information

ROHACELL® HERO – Thermal Insulator

Innovative **ROHACELL® HERO** delivers the latest in materials technology for composite structures that are lightweight, durable over their lifetime and less expensive to produce.

Yet another advantage is its superior insulating performance.

Not only does the rigid structural foam deliver mechanical strength at all of its very low densities, but the innovative closed-cell foam insulates applications very effectively from hot or cold environments.

LIGHTWEIGHT "DUAL-USE" SANDWICH PANELS

By providing both mechanical strength and thermal insulation, ROHACELL® HERO panels are uniquely "dual-use". Their impressive mechanical strength can meet structural requirements, while at the same time, supress the transfer of heat.

Possible dual-use sandwich panel applications include shelter systems in harsh environments, space applications, satellites, protective enclosures for components in high altitude aircraft, and others.

EXCELLENT INSULATING PERFORMANCE – AT ANY DENSITY

Depending on the density of the ROHACELL® HERO product grade, thermal conductivity varies.

As product density decreases, thermal performance or insulating capacity increases. However, excellent thermal conductivity occurs at all densities.

THERMAL CONDUCTIVITY OF ROHACELL® HERO

Product Grade	Density		Thermal Conductivity (W/mK)
71 HERO	kg/m³ lbs/ft³	75 4.68	0.0246
110 HERO	kg/m³ lbs/ft³	110 6.87	0.0282
200 HERO	kg/m³ lbs/ft³	205 12.80	0.0430

Test method ASTM C518. Technical data values presented are typical for nominal density, subject to normal manufacturing variations.

FOR MORE TECHNICAL DATA

To see a full listing of technical test data, refer to the properties table on the back of this sheet.

If you require additional test results not shown or have any questions, please speak to your local ROHACELL® representative.

For contact details, visit the "Contact Page" on our website at www.rohacell.com.

Property	Test Method	Unit	ROHACELL® 51 HERO	ROHACELL® 71 HERO	ROHACELL® 110 HERO	ROHACELL® 200 HERO
Density	ISO 845	kg/m³ lbs/ft³	52 3.25	75 4.68	110 6.87	205 12.80
Compressive Strength	ISO 844	MPa psi	0.6 87	1.1 160	2.5 363	7.1 1,030
Compressive Modulus	ISO 844	MPa psi	32 4,640	48 6,960	83 12,000	180 26,100
Tensile Strength	ISO 527-2	MPa psi	2.6 377	4.1 595	6.3 914	12.3 1,780
Tensile Modulus	ISO 527-2	MPa psi	82 11,900	123 17,800	189 27,400	389 56,400
Elongation at Break	ISO 527-2	%	8	9.5	9.9	10.8
Shear Strength	DIN 53294	MPa psi	0.7 102	1.3 189	2.3 334	5.2 754
Shear Modulus	DIN 53294	MPa psi	22 3,190	28 4,060	50 7,250	109 15,800
Maximum Shear Strain	DIN 53294	%	7.0	7.2	7.2	7.2
Coefficient of Thermal Expansion		1/K*10E-5	3.76	3.77	3.72	4.26
Thermal Conductivity	ASTM C518	(W/mK)	N/A	0.0246	0.0282	0.0430

Technical data values presented are typical for nominal density, subject to normal manufacturing variations. All ROHACELL® products are closed-cell rigid foams based on polymethacrylimide (PMI) chemistry and contain no CFC's.

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