

Product Information

ROHACELL® WF

FOAM FOR THE MOST DEMANDING MANUFACTURING PROCESS CONDITIONS

ROHACELL® WF foam core has been specifically designed for use in aerospace applications.

Based on polymethacrylimide (PMI) chemistry, it is engineered to meet demanding requirements from aircraft manufacturers and has led to many specifications for more than 30 years, including MIL, CMS and others.

PROCESSING AND PRODUCTION

ROHACELL® core makes it possible to produce sandwich components in a single step (co-curing), resulting in reduced overall production time.

ROHACELL® WF can take curing temperatures up to 130 °C (266 °F) and pressures up to 0.7 MPa (102 psi).

After heat treatment, **ROHACELL® WF-HT** can even be used at curing temperatures of 180 °C (356 °F) and at pressures of 0.7 MPa (102 psi).

ROHACELL® WF is highly suited to autoclave technologies and vacuum infusion processes, including RTM and VARTM processes.

WEIGHT SAVINGS

When building composite sandwich components, lightweight ROHACELL® WF has a closed cell structure that ensures resin stays exactly where you want it – in the interface. This eliminates excess and unnecessary resin that adds undesirable weight to the finished part.

THERMOFORMING AND SHAPING

ROHACELL® WF can be easily thermoformed or CNC machined to meet customer requirements, bringing tremendous manufacturing advantages.

High precision, pre-shaped and ready-to-use foam cores in complex or simple geometries can be supplied by the ROHACELL® Shapes Department.

Property	Test Method	Unit	ROHACELL® 51 WF	ROHACELL® 71 WF	ROHACELL® 110 WF	ROHACELL® 200 WF	ROHACELL® 300 WF
Density	ISO 845	kg/m³ lbs/ft³	52 3.25	75 4.68	110 6.87	205 12.8	300 18.7
Compressive Strength	ISO 844	MPa psi	0.8 116	1.7 246	3.6 522	9.0 1,305	17.8 2,580
Tensile Strength	ISO 527-2	MPa psi	1.6 232	2.2 319	3.7 536	6.8 986	12.0 1,740
Tensile Modulus	ISO 527-2	MPa psi	75 10,870	105 15,220	180 26,100	350 50,760	578 83,830
Elongation at Break	ISO 527-2	%	3.0	3.0	3.0	3.5	2.8
Shear Strength	DIN 53294	MPa psi	0.8 116	1.3 188	2.4 348	5.0 725	8.3 1,200
Shear Modulus	DIN 53294	MPa psi	24 3,480	42 6,090	70 10,150	150 21,750	364 52,790
Coefficient of Thermal Expansion		1/K*10E-5	3.11	3.09	3.07	3.76	3.50

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



FOR MORE INFORMATION

If you have questions or would like to discuss using ROHACELL® WF in your application, we encourage you to talk with your local ROHACELL® representative.

Visit <u>www.rohacell.com</u> to locate and directly connect with the contact in your region, by phone or email.

Disclaimer

 $\ensuremath{\mathsf{ROHACELL}}^{\otimes}$ is a registered trademark of Evonik Industries and its subsidiaries.

This information and all technical and other advice are based on Evonik's present knowledge and experience. However, Evonik assumes no liability for such information or advice, including the extent to which such information or advice may relate to third party intellectual property rights. Evonik reserves the right to make any changes to information or advice at any time, without prior or subsequent notice. EVONIK DISCLAIMS REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, AND SHALL HAVE NO LIABILITY FOR, MERCHANTABILITY OF THE PRODUCT OR ITS FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE), OR OTHERWISE. EVONIK SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. It is the customer's sole responsibility to arrange for inspection and testing of all products by qualified experts. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of the corresponding product, and does not imply that similar products could not be used.

Evonik Resource Efficiency GmbH

High Performance Polymers Performance Foams 64293 Darmstadt, Germany Phone +49 6151 18-1005

Evonik Foams Inc.

Theodore, Alabama USA Phone +1 866 764-6235

Evonik Specialty Chemicals (Shanghai) Co., Ltd.

Shanghai, China

Phone +86 1391 6212034

