

## Aircell HR - HTR

**Aircell HR - HTR** is a partially cross-linked, structural cellular PVC foam, ideal for composite sandwich structures. Compatible with most resin systems; polyester, vinylester, phenolic or epoxy. **Aircell** can be processed at room temperature or at any temperature below 80°C. Developed for the marine industry, windmills, transport and composite applications in general. **Aircell** can be supplied in different sheets, either rigid or flexible, to be adapted to different surface shapes. For series production, **Aircell** can also be supplied in kit form to reduce processing time and wastage.

### Technical Data Sheet - Aircell HR - HTR

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Property	Method	Unit	HR 40	HR 45	HR 60	HTR 60	HR 80	HTR 80	HR 100	HR 130	HR 200	HR 250
Nominal Density	ISO 845	kg/m3	40	48	60	60	80	80	100	130	200	250
Compressive Strength	ISO 844:2014 B	Mpa	0,52	0,62	0,98	1,01	1,6	1,63	2,05	3,22	5,07	6,88
Compressive Modulus	ISO 844:2014 B	Mpa	37	44	67	65	97	96	121	183	300	384
Compressive Modulus	DIN 53421	N/mm2	37	48	69	na	97	97	125	160	260	
Tensile Strength	ASTM D 1623	Mpa	0,71	0,98	1,82	1,98	2,74	2,84	3,18	4,35	6,26	7,19
Tensile Strength	DIN 53571	N/mm2	0,7	1,10	1,30	na	2,00	2,00	2,70	3,80	6,20	
Tensile Modulus	ASTM D 1623	Mpa	68	71	100	97	146	138	162	227	358	439
Tensile Modulus	DIN 53457	N/mm2	28	35	45	na	66	66	84	115	180	
Shear Strength	ISO 1922	Mpa	0,47	0,52	0,79	0,86	1,20	1,26	1,48	2,44	3,44	4,37
Shear Modulus	ISO 1922	Mpa	15	16	21	21	30	29	36	55	77	98
Shear Modulus	ASTM C393	Mpa	13	15	22	na	30	30	38	50	75	
Shear Strain	ISO 1922	%	8	10	16	29	23	32	27	30	30	
Thermal Conductivity	ISO 8301	W/m.k	0,031	0,031	0,031	0,031	0,033	0,033	0,035	0,039	0,048	
Water Absorption	ASTM 272	kg/m2	0,09	0,09	0,07	0,07	0,06	0,06	0,04	0,03	0,02	
Thermal Bending Stability	DIN 53424	°C	80	80	85	100	85	100	90	95	100	
			Nominal Values									

Density tolerance  $\pm 10\%$ . Continuous operating temperature is -200°C to 70°C. Maximum processing temperature is dependent on time and the pressure applied, but can be processed up to 80°C. Material can be heat treated for higher temperature resistance of 100°C. For higher temperatures or any other issue, please contact MEL Composites for assistance.



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