



TECHNICAL DATA

PVC Foam | Divinycell H

High performance PVC core material

Divinycell H combines excellent mechanical properties with low weight, making it one of the most widely used structural core materials. Its PVC chemical structure delivers unique features and durability across a broad range of applications. With a proven track record in marine, land transportation, wind energy, infrastructure, and industrial markets including defence, Divinycell H benchmark PVC foam core for structural sandwich composites and buoyancy applications.

Divinycell H is ideal for applications subject to fatigue, slamming or impact loads. Other key features of Divinycell H include consistent high quality, excellent adhesion/peel strength, excellent chemical resistance, low water absorption and good thermal/acoustic insulation. Divinycell H is compatible with virtually all commonly used resin and manufacturing systems. Divinycell PVC foams also feature very low resin uptake, enabling weight and cost saving.

Mechanical properties

Property	Test Procedure	Unit		H45	H60	H80	H100	H130	H160	H200	H250
Compressive Strength ¹	ASTM D 1621	psi	Nominal	87	130	203	290	435	493	783	1,044
			Minimum	72	102	167	239	348	406	653	885
Compressive Modulus ¹	ASTM D1621-B-73	psi	Nominal	7,250	10,150	13,050	19,575	24,650	29,010	44,965	58,015
			Minimum	6,525	8,700	11,600	16,675	21,030	25,380	38,435	50,765
Tensile Strength ¹	ASTM D 1623	psi	Nominal	203	261	363	508	696	783	1,030	1,334
			Minimum	160	218	319	362	508	580	914	1,160
Tensile Modulus ¹	ASTM D 1623	psi	Nominal	7,975	10,875	13,775	18,850	25,375	29,733	36,250	46,400
			Minimum	6,525	8,265	12,325	15,225	19,575	23,206	30,450	37,710
Shear Strength	ASTM C 273	psi	Nominal	81	110	167	232	319	377	508	653
			Minimum	67	91	138	203	276	319	464	566
Shear Modulus	ASTM C 273	psi	Nominal	2,175	2,900	3,915	5,075	7,250	8,700	10,590	14,070
			Minimum	1,740	2,320	3,335	4,060	5,800	7,250	9,422	11,750
Shear Strain	ASTM C 273	%	Nominal	12	20	30	40	40	40	45	45
Density	ISO 845	lb/ft ³	Nominal	3.0	3.8	5.0	6.3	8.1	10.0	12.5	15.6

All values measured at +73,4°F

1. Properties measured perpendicular to the plane.

Nominal value is an average value of a mechanical property at nominal density.

Minimum value is a minimum guaranteed mechanical property a material has independently of density.

Product characteristics

- Excellent strength-to-weight ratio
- Excellent fatigue properties
- Low resin uptake
- Durability under load
- Superior damage tolerance
- Fast and easy to process
- Good chemical resistance
- Low water absorption
- Good temperature resistance

Typical application areas



Technical characteristics

Characteristics ¹	Unit	H45	H60	H80	H100	H130	H160	H200	H250	Test method
Density range	lb/ft ³	2.7-3.4	3.4-4.3	4.2-5.4	5.6-7.2	7.3-9.3	9.1-11.3	11.3-14.4	14.4-18.1	-
Thermal conductivity ²	Btu x in/(ft ² x h x °F)	0.194	0.201	0.215	0.229	0.250	0.278	0.305	0.340	EN 12667
Coeff, linear heat expansion	x10 ⁻⁶ /°F	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	ISO 4897
Heat Distortion Temperature	°F	+257	+257	+257	+257	+257	+257	+257	+257	DIN 53424
Continuous temp range	°F	-325/+160	-325/+160	-325/+160	-325/+160	-325/+160	-325/+160	-325/+160	-325/+160	-
Max process temp	°F	+194	+194	+194	+230	+230	+230	+230	+230	-
Dissipation factor	-	0.0002	0.0003	0.0005	0.0006	0.0009	0.0012	0.0015	0.0019	ASTM D 2520
Dielectric constant	-	1.05	1.06	1.09	1.11	1.15	1.18	1.23	1.29	ASTM D 2520
Poissons ratio ³	-	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	D638-08

1. Typical values
2. Thermal conductivity at +68°F
3. Standard deviation is 0.045

Maximum processing temperature is dependent on time, pressure, and process conditions. To confirm that Divinycell H is compatible with users particular processing parameters and for optimal design of applications used in high operating temperatures in combination with continuous load, please contact Diab Technical Services.

Dimensions

Format		Unit	H45	H60	H80	H100	H130	H160	H200	H250
Plain sheets	Length	inch	96.06	96.06	96.06	85.04	77.17	73.23	68.11	64.57
	Width	inch	48.03	48.03	48.03	42.13	38.19	36.02	33.46	31.50
GS sheet	Length	inch	48.03	48.03	48.03	42.52	38.58	36.61	34.06	-
	Width	inch	32.01	32.01	32.01	42.13	38.19	36.02	33.46	-
GS sheet	Length	inch	48.03	48.03	48.03	-	-	-	-	-
	Width	inch	48.03	48.03	48.03	-	-	-	-	-

Tolerances	Unit	Length	Width	Thickness
Plain sheets	inch	-0.39/0.24	-0.20/+0.24	-/+ 0.02

Storage of product

The shelf life of Divinycell is unlimited when it is stored in its original package on ambient indoor storage conditions and protected against UV exposure.

Divinycell H is type approved by:



Disclaimer:

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