



TECHNICAL DATA

Divinycell U

THE HIGH PERFORMANCE SANDWICH CORE

Divinycell U foam is a recyclable, prepreg compatible sandwich core offering excellent Fire, Smoke and Toxicity (FST) properties, good mechanicals, and processing characteristics.

MECHANICAL PROPERTIES DIVINYCELL® U

Property	Test Method	Unit		U60	U80	U110
Compressive Strength	ACTM D 1C 21	:	Nominal 102 159	261		
	ASTM D 1621	psi	Minimum	80	116	188
Compressive Modulus	ASTM D 1621	nei	Nominal 3045 5075	7975		
	ASTM D 1951	psi	Minimum	1885	3045	3335
Tensile Strength	ASTM D 1623	:	Nominal 305 406	522		
	W21MD1653	psi	Minimum	261	333	435
Shear Strength	ASTM C 273	nei	Nominal 116 145	232		
	ASTMC2/5	psi	Minimum	87	116	188
Shear Modulus	ACTM (272	:	Nominal	1885	2320	3335
	ASTM C 273	psi	Minimum	1595	1885	2610
Density ¹	ASTM D 1622	lb/ft³	Nominal	3.7	5	6.9

^{1.} Tolerance ±10%

For optimal design of applications used in high operating temperatures in combination with continuous load, please contact Diab Technical Services for detailed design instructions.

PRODUCT CHARACTERISTICS

- Excellent FST properties
- Exceptional OSU heat release performance
- High temperature resistance
- · Good chemical resistance
- Hot formable
- Acoustic and thermal insulation
- Fast and easy to process
- No film adhesive required
- No need to edge fill

APPLICATION AREAS

Structures, radomes, and interior components.

Customers	Specifications			
LM	Aero G22084			
ULA	STM1035			



TECHNICAL CHARACTERISTICS DIVINYCELL® U

FIRE, SMOKE & TOXICITY CHARACTERISTICS

Characteristic	Standard	Test Method	U60	U80	U110
Vertical Burn, 60 sec	FAR / CS 25.853 Appendix F	Part I (b)(4)	Pass	Pass	Pass
	FAR / CS 25.853 Appendix F	Part IV		<25/<20	<25/<20
Heat Release, Peak / Total	Airbus ABD 0031	AITM 2.0006	<25/<20		
r cak r rotar	Boeing BSS 7322	ASTM E906			
Smoke Density1, Ds4, Ds1.5	FAR / CS 25.853 Appendix F	Part V			
	Airbus ABD 0031	AITM 2.0007	<1	2	2
	Boeing BSS 7238	ASTM E662			
Combustion Toxicity ¹	Airbus ABD 0031	AITM 3.0005	Pass	Pass	Pass
	Boeing BSS 7239	ASTM E662	L922	Lq22	Lq22

^{1.} Flaming mode

ELECTRICAL AND THERMAL CHARACTERISTICS

Characteristic	Standard	Test method	U60	U80	U110
Dissipation Factor	ASTMD 2520 M. I I.A.		0.0003	0.0008	0.0003
Dielectric Constant	ASTM D 2520	Method A	1.06	1.10	1.13
Thermal Conductivity, W/(m-°K) at 23°C	ASTM C 177	-	0.036	0.038	0.039

TECHNICAL CHARACTERISTICS

Characteristic	Standard	Result	
Coefficient of Linear Expansion	ASTM D 696	x10 ⁻⁶ /°C	
Tg	-	217°C	

Maximum temperature is dependent on time, pressure, and process conditions. Therefore, users are advised to contact Diab Technical Services to confirm that Divinycell U is compatible with their processing parameters.

PHYSICAL CHARACTERISTICS

Format		Unit	U60	U80	U110
Diain about	Length	inch	96.06	96.06	96.06
Plain sheets	Width	inch	48.03	45.0	41.97

Disclaimer:

This data sheet may be subject to revision and changes due to developments to the products. The data is derived from tests and experience. If not stated as minimum values, the data is average data and should be treated as such. Calculations should be verified by actual tests. The data is furnished without liability for the company and does not constitute a warranty or representation in respect of the material or its use. The company reserves the right to release new data sheets in replacement.

All content in this publication is protected by international copyright laws. Copyright © Diab March 2023.

Diab Group

Drottninggatan 7, 5th floor SE-252 21 Helsingborg, Sweden Tel +46 (0) 430 163 00 E-mail: info@diabgroup.com