

## Hybrid Series

# NovoVellum® HFW01

A high quality and strong POE-based formulation offering security and long lasting protection to your modules. NovoVellum® HFW01 is a highly reflective white colored encapsulant. Due to its high reflectivity, this encapsulating film supplies additional power output resulting in high-efficient performing modules.

Property features	Test method	Unit	
Thickness sheet		µm	200 – 1100
Width sheet		mm	Up to 1450
Core inside diameter		mm	76 or 152
Surface finish			Matt, rough or polished
Packaging			Aluminium bag
Interleaving foil			20µm HDPE, optional
Uncured properties	Test method	Unit (caliper 460 µm)	
<b>OPTICAL PROPERTIES</b>			
Integrated reflectivity 400 – 800 nm	In house method	%	94
Maximum reflectivity	In house method	%	98
<b>MECHANICAL PROPERTIES</b>			
Modulus	ISO 527-3	MPa	50
Nominal strain at break	ISO 527-3	%	> 350
Tensile stress at break	ISO 527-3	MPa	5
Hardness Shore A	DIN 53 505	-	65
Shrinkage	On glass		
130°C		%	0.0
140°C		%	1.0
150°C		%	2.5
<b>OTHER PROPERTIES</b>			
Normalized water vapor transmission rate	ASTM F1249	g.mm/(m <sup>2</sup> day)	< 1.5
Density		g/cm <sup>3</sup>	0.95
Cured properties	Test method	Unit	
<b>ELECTRICAL PROPERTIES</b>			
Dielectric strength	ASTM D149-09 meth A		
Dielectric strength		MV/m	> 40
Breakdown voltage		kV	> 15
DC resistance of insulating materials	ASTM 257-07		
Volume resistance		Ω	> 4 x 10 <sup>12</sup>
Volume resistivity		Ω cm	> 1.5 x 10 <sup>15</sup>
<b>OTHER PROPERTIES</b>			
Adhesion to glass		N/cm	> 50 *

\* Value function of cure conditions.



**NovoPolymers**