

Product : VolcaLite® **Grade :** VLSTDA.0901BT

Status⁷ : Commercial

Revision : 1

Date : 25-Aug-2008

General Description

AZDEL VolcaLite VLSTDA.0901BT is a thermoformable, thermoplastic composite sheet comprised of a low-density polypropylene and chopped basalt-fiber core, combined with a PET scrim with barrier film attached to one surface and a perforated adhesive film to the other surface. This material is typically used as a substrate in semi-structural applications where a very high strength-to-weight ratio is required, such as in automotive headliners, door panels, rear parcel shelves, sunshades and other interior trim.

Construction Code	Surface A	Surface B
BZ	Perforated adhesive film	PET scrim with Barrier film

Typical Properties¹ - Independent of Molded Thickness

Property	Test Method	Unit	Target Value
Basis Weight (mass-per-unit-area)			
- Low density Core	ASTM D-3776	g/m ²	900
- Total (including film and scrim)	ASTM D-3776	g/m ²	1002
Sheet Thickness (as produced)		mm	
Free-Loft ratio ² (maximum, when heated to 205°C)	Internal		
Color			
- Low Density Core	Visual		Natural
- PET Scrim with Barrier film	Visual		White
- Adhesive Film	Visual		Clear
Flammability			
- Maximum Burn Rate	FMVSS-302	mm/min.	
- Self-extinguishing?			
Fogging (Haze) - Minimum Fog Number			
Odor - Maximum Number (using 1-Liter Glass Jars)			
Maximum in-use operating temperature ³		°C	105

Typical Properties¹ - Dependent on Molded Thickness

Property	Test Method	Unit	Molded Thickness (mm)		
			2.7		
Specific Gravity					
MD ⁴ Flex. Slope	AZDEL Internal	N/cm	40.00		
TD ⁵ Flex. Slope	AZDEL Internal	N/cm	28.70		
MD Flex. Peak Load	AZDEL Internal	N	24.10		
TD Flex. Peak Load	AZDEL Internal	N	20.00		
Average Flex. Peak Load	AZDEL Internal	N			
MD/TD Peak Load Ratio	AZDEL Internal				
Toughness					

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Typical Properties¹ - Dependent on Molded Thickness (cont'd)

Property	Test Method	Unit	Molded Thickness (mm)		
			2.7		
Dynatup Impact	ASTM C-522	cfm	none		
Air Permeability					
Acoustics (with Fabric ⁶)					
- Sound Absorption Coef.					
- Sound Absorption Coef.					
- Sound Absorption Coef.	SAE J1400	@ 500 Hz			
- Sound Absorption Coef.	SAE J1400	@ 1000 Hz			
- Sound Absorption Coef.	SAE J1400	@ 2000 Hz			
- Sound Absorption Coef.	SAE J1400	@ 4000 Hz			
Peel Test					
- Surface A					
- Surface B					

Notes

1. Measured on flat plaques.
2. The free-loft ratio is the ratio of original, as produced, sheet thickness versus the lofted sheet thickness when heated to 205°C and not molded.
3. The maximum in-use temperature is typically driven by the adhesion of surface skins to the low density core, or by the de-bonding temperature of the adhesive film.
4. MD = Properties measured in the as manufactured Machine Direction.
5. TD = Properties measured perpendicular to the as manufactured Machine Direction (i.e.; Transverse.)
6. A typical automotive fabric and foam are used for the acoustical evaluation. Please contact your AZDEL representative if you want your own cover-stock tested with this product.
7. This Product is commercially available, subject to AZDEL's Standard Terms of Sale.

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