AIREX BALTEK BANOVA

DATA SHEET

10.2015 (replaces 07.2015)

AIREX® T10

The Industrialised Structural Foam Core

CHARACTERISTIC

- Very high compression and shear properties
- Outstanding fatigue strength
- Homogeneous cell structure
- Easy to process with all types of resin and lamination processes
- High process temperature up to 150°C (short peaks up to 180°C)
- Good adhesion (skin-to-core bond)
- Excellent long term thermal stability, up to 100 °C (212 °F)
- No water absorption, after expansion nor out-gassing
- Recyclable and recycled material
- Highly consistent material properties
- Comprehensive material traceability (machine-readable batch information on each foam sheet)

APPLICATIONS

- **Road**
  Structural and semi-structural parts in interior and exterior of cars
  Sidewalls, floors, skirts/covers of trucks
- **Wind energy**
  Blades (shear webs & shells), nacelles
- **Marine**
  Hulls, decks, superstructures, bulkheads, stringers, interiors
- **Industrial**
  Covers, containers, X-ray tables, sporting goods

PROCESSING

- Contact molding (hand/spray)
- Vacuum infusion (VARTM)
- Resin injection (RTM)
- Adhesive bonding
- Pre-preg processing
- Compression molding (GMT, SMC)
- Thermoforming

AIREX® T10 is a closed-cell, thermoplastic and recyclable polymer foam with a very homogeneous cell structure, high mechanical properties and an outstanding price / performance ratio.

It has an extraordinary resistance to fatigue, is chemically stable, UV-resistant and has negligible water absorption. It is thermally stable during high temperature processing and post curing without after expansion or out-gassing. T10 is designed for easy use with all resin systems and processing technologies.

AIREX® T10 is ideally suited for high volume applications of lightweight sandwich structures subjected to static and dynamic loads and/or exposed to elevated temperatures during manufacturing.

AIREX BALTEK BANOVA

Typical properties for AIREX® T10		Unit (metrical)	Value[1)]	T10.100	T10.110
Density	ISO 845	kg/m³	Average *Typ. range*	100 *93 - 107*	110 *103 - 117*
Compressive strength perpendicular to the plane	ISO 844	N/mm²	Average *Minimum*	1.4 *1.2*	1.6 *1.35*
Compressive modulus perpendicular to the plane	DIN 53421	N/mm²	Average *Minimum*	105 *90*	125 *110*
Tensile strength perpendicular to the plane	ASTM C297	N/mm²	Average *Minimum*	2.0 *1.5*	2.3 *1.8*
Tensile modulus perpendicular to the plane	ASTM C297	N/mm²	Average *Minimum*	150 *125*	165 *140*
Shear strength lengthwise	ISO 1922	N/mm²	Average *Minimum*	1.0 *0.85*	1.15 *0.95*
Shear strength crosswise	ISO 1922	N/mm²	Average *Minimum*	0.8 *0.73*	0.9 *0.78*
Shear modulus lengthwise	ISO 1922	N/mm²	Average *Minimum*	34 *29*	38 *32*
Shear modulus crosswise	ISO 1922	N/mm²	Average *Minimum*	21 *18*	23 *20*
Shear elongation at break	ISO 1922	%	Average *Minimum*	20 *15*	20 *15*
Thermal conductivity at room temperature	ISO 8301	W/m.K	Average	tbd	tbd
Standard sheet	Width	mm ± 5		1005	1005
	Length[2)]	mm ± 5		2440	2440
	Thickness	mm ± 0.5		5 to 45	5 to 45

Finishing Options and other dimension upon request

[1)] Minimum values acc. DNV definition; test sample thickness 20 mm except compressive modulus (40 mm)
[2)] Alternative lengths on request

The data provided gives approximate values for the nominal density and DNV minimum values according to DNV type approval certificate. The information contained herein is believed to be correct and to correspond to the latest state of scientific and technical knowledge. However, no warranty is made, either expressed or implied, regarding its accuracy or the results to be obtained from the use of such information. No statement is intended or should be construed as a recommendation to infringe any existing patent

AIREX BALTEK BANOVA

Typical properties for AIREX® T10		Unit (imperial)	Value[1)]	T10.100	T10.110
Density	ISO 845	lb/ft³	Average *Typ. range*	6.2 *5.8 – 6.7*	6.9 *6.4 - 7.3*
Compressive strength perpendicular to the plane	ISO 844	psi	Average *Minimum*	203 *174*	232 *196*
Compressive modulus perpendicular to the plane	DIN 53421	psi	Average *Minimum*	15‘230 *13‘050*	18‘130 *15‘950*
Tensile strength perpendicular to the plane	ASTM C297	psi	Average *Minimum*	280 *218*	334 *261*
Tensile modulus perpendicular to the plane	ASTM C297	psi	Average *Minimum*	21‘760 *18‘130*	23‘930 *20‘310*
Shear strength lengthwise	ISO 1922	psi	Average *Minimum*	145 *123*	167 *138*
Shear strength crosswise	ISO 1922	psi	Average *Minimum*	116 *106*	131 *113*
Shear modulus lengthwise	ISO 1922	psi	Average *Minimum*	4‘931 *4‘206*	5‘511 *4‘641*
Shear modulus crosswise	ISO 1922	psi	Average *Minimum*	3‘046 *2‘611*	3‘336 *2‘901*
Shear elongation at break	ISO 1922	%	Average *Minimum*	20 *15*	20 *15*
Thermal conductivity at room temperature	ISO 8301	Btu.in/ hr.ft².F	Average	tbd	tbd
Standard sheet	Width	mm ± 5		1005	1005
	Length[2)]	mm ± 5		2440	2440
	Thickness	mm ± 0.5		5 to 45	5 to 45

Finishing Options and other dimension upon request

[1)] Minimum values acc. DNV definition; test sample thickness 20 mm except compressive modulus (40 mm)
[2)] Alternative lengths on request