BASALTEX®
The Thread of stone

Basalt - Wikipedia

It is the **most common volcanic rock type on Earth**, being a key component of oceanic crust as well as the principal volcanic rock in many mid-oceanic islands.

Basalt rocks towards basalt filaments

Basalt rocks towards basalt filaments

- Melt temperature
  1400 - 1450°C
- Multi-holes bushings
- Filaments:
  10 to 20 µm

- Sizing (0,6 %)
- Fiber Stabilisation
- Customized

- Winding on cakes
- Direct Rovings
- Assembled Rovings

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Typical natural mineral composition of basalt filaments

Chemical components	Weight % Basalt	Weight % E-Glass
SiO_2 (silica)	57.5	55
Al_2O_3 (alumina)	16.9	15
Fe_2O_3 (ferric oxide)	9.5	0.3
MgO	3.7	3
Na_2O	2.5	0.8
TiO_2	1.1	-
K_2O	0.8	0.2
B_2O_3	-	7
F	-	0.3

BASALTEX' product portfolio

BASALTEX®
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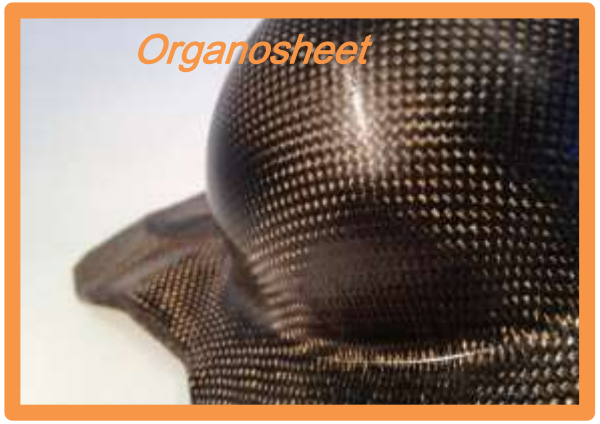


MINERAL
FIBER
LOW Ecological footprint

UNIQUE FIRE and HEAT
PERFORMANCE

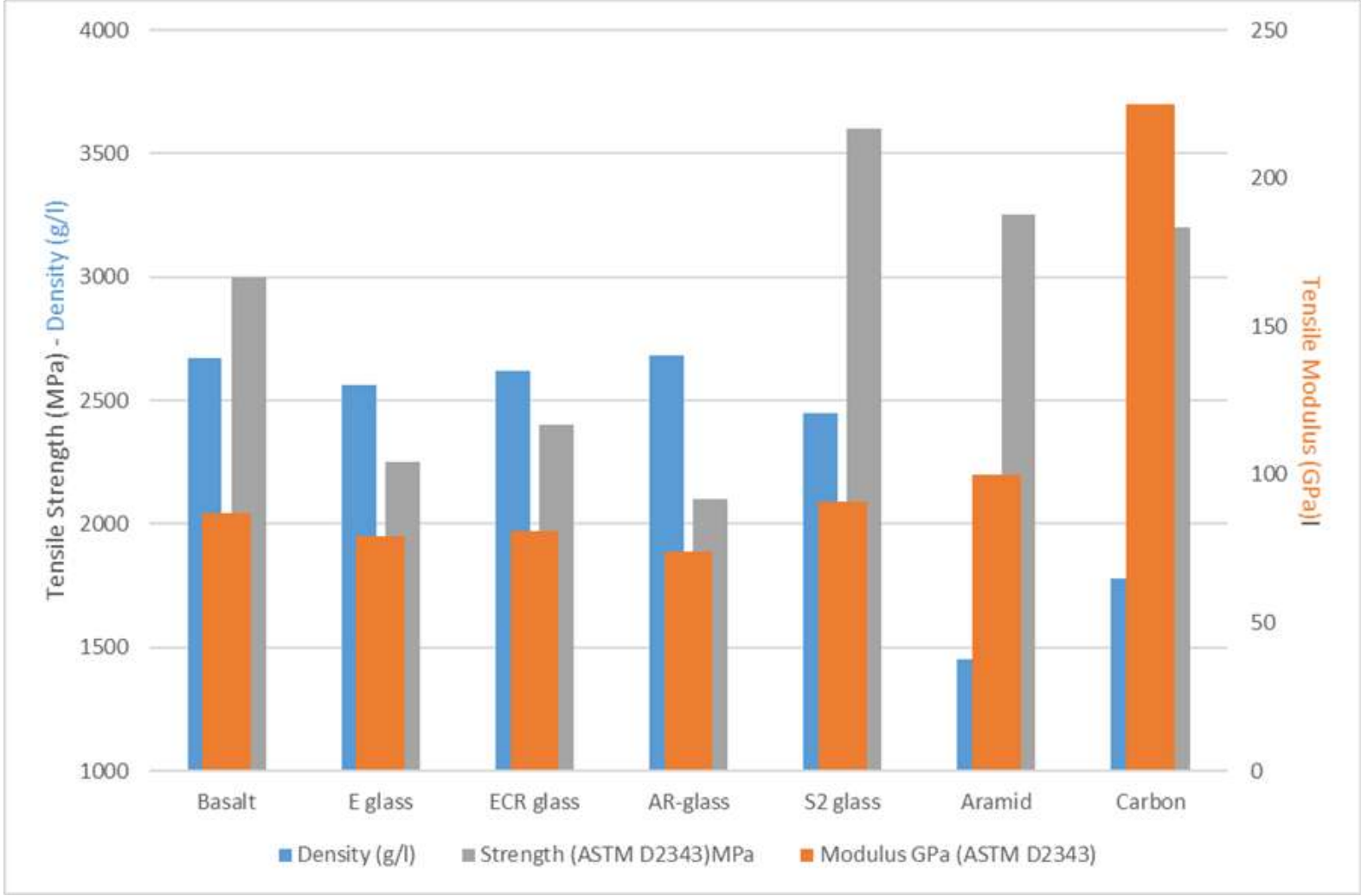
EXCELLENT
MECHANICAL
PROPERTIES

GREAT
CHEMICAL
RESISTANCE

MINERAL
FIBER
LOW Ecological footprint

- Report of VITO (Flemish Institute for Technological Research) of June 2017: “ Summary report on the environmental potential of basalt fibres versus glass fibres”
  - Comparative life cycle assessment
  - A general methodological framework for LCA is defined by ISO in its 14040 and 14044 standards (ISO, 2006
  - Cradle-to-Customers Gate for fiber production and composites
- Objective comparison
- Full report available on request info@Basaltex.com

EXCELLENT MECHANICAL PROPERTIES



BASALTEX
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plus EXCELLENT

IMPACT and VIBRATION DAMPING

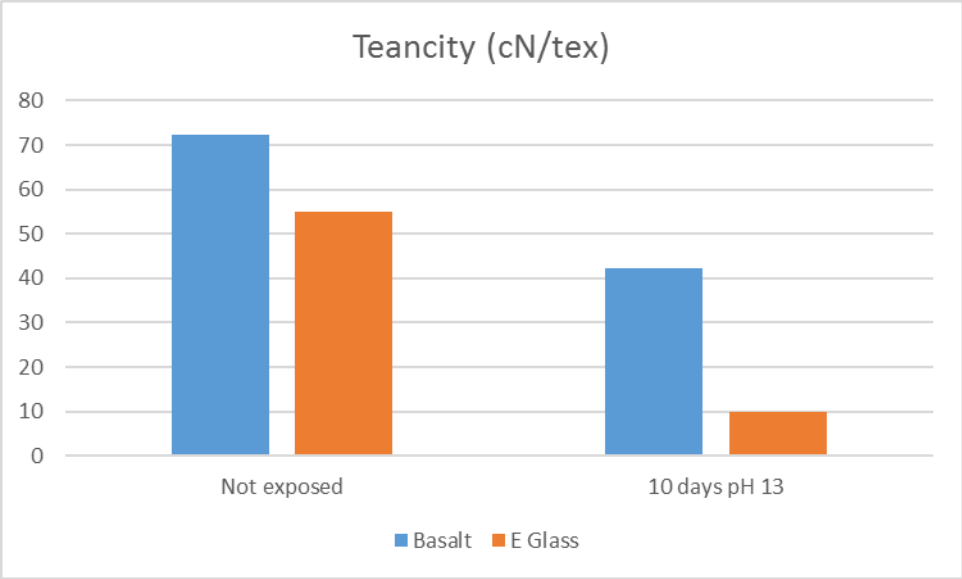
- Mechanical stiffness
- Wave impact
- Recycable

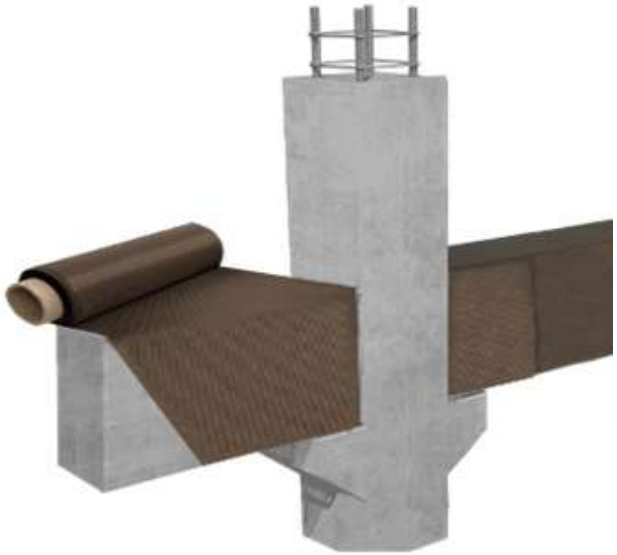
ANT-ARCTIC-LAB

SINGLE-HANDED - NONSTOP - 34.000 NM

EXTREME SAILING

GREAT
CHEMICAL and CORROSION
RESISTANCE





UNIQUE FIRE and HEAT PERFORMANCE

BASALT – PFA – FLAX prepreg

EN 45545 for public transport

	Test standard	Mean Value	R1-HL1	R1-HL2	R1-HL3
Critical Heat Flux (CFE)	T02 ISO5658-2	**50,0 kW/m²**	≥ 20 kW/m²	≥ 20 kW/m²	≥ 20 kW/m²
Maximum Average Rate of Heat Release (MARHE)	T03.01 ISO5660-1: 50 kW/m²	**20.63 kW/m²**	-	≤ 90 kW/m²	≤ 60 kW/m²
Smoke Value at 4 minutes Ds(4.0)	T10.01 ISO5659-2: 50 kW/m²	**97.61**	≤ 600	≤ 300	≤ 150
Total Smoke Release after 4 minutes (VOF4)	T10.02 ISO5659-2: 50 kW/m²	**282.14 min**	≤ 1200 min	≤ 600 min	≤ 300 min
Smoke Toxicity Index after 4 minutes CITG(4.0)	T11.01 ISO5659-2: 50 kW/m² + EN45545-2 Annex C Method 1	**0.110**	≤ 1.2	≤ 0.9	≤ 0.75

Source: Ecotechnilin

BASALT – PFA – FLAX prepreg

FAR 25,853 for aircraft interiors

Test	Method		Value	Criteria
Flammability (60s. vertical)	FAR 25.853	Afterflame (s) Burn Length (mm) Drip Exting Time (s)	**0,0** **58** **0,0**	15 152,4 3
Heat release	FAR 25.853	2 min. total HR (kWmin/m²) Peak HR (kW/m²)	**15,0** **18,7**	65 65
Smoke emission	FAR 25.853	Ds max. in 4 min.	**10,11**	200
Toxic gas emission	ABD0031	CO HCN HF HCl SO2 NOX	**113** **3** **< 2** **< 2** **6** **11**	PASS

Source: Ecotechnilin

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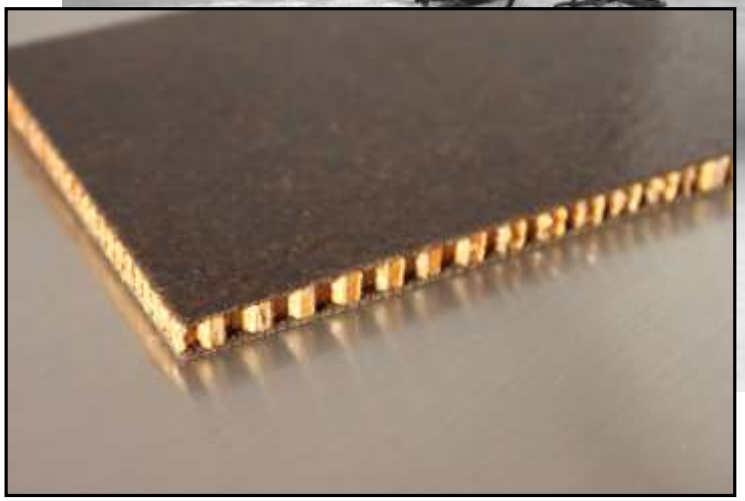
BASALT – PFA – FLAX prepreg

FAR 25,853 for **aircraft interiors**



EcoTechnilin
NATURAL FIBRE SOLUTIONS

tfc
BIOMASS BASED CHEMICALS

BASALTEX' FABRIC

SBI test – EN 13501 **railway tunnel**

Fire resistant for more than 20 minutes at a temperature >1000°C

Euroclass B-s2.d0)

BASALTEX' Fire resistant lightweight sandwich panels

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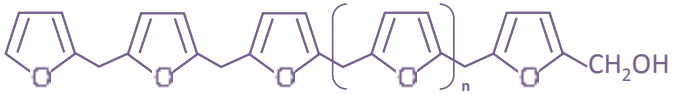
Poly Furfuryl Alcohol / PFA



tfc
BIOMASS BASED CHEMICALS

- Liquid polymer systems
- VOC free formulation
- Thermomechanical and FST properties like phenolic resins

Basalt – PFA Prepreg

- Short cycles time
- Easy to use: Stable at room temperature
- Store at 7°C

Prepreg development line

- Co-ownership
- Max. 1,80 m wide
- Pilot-line and small productions
- **Samples for testing available**

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