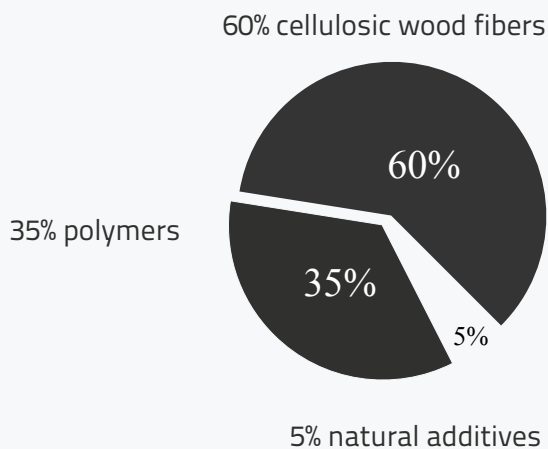


Technical Properties

Wood Plastic Composite

nature + technology



characteristics

While the wood fibers create a natural finish, the polymer base provides outdoor durability.

Nature and technology joined as the foundation of its hardness.

Physical-Mechanical Parameters

Wood Plastic Composite

Test Property	Test Method	Test Conditions	Result
Specific Gravity	ASTM D7031-11 ap. 5,14 ASTM D792-08 Method B	absolute alcohol 23 °C	1.291 gr/ cm ³
Flexural Strength (MOR)	ASTM D7031-11 sections 5.5 y 5.20 ASTM D6109-10 Method A	speed: 10.9 mm/min span: 368 mm	28.5 MPa
After freeze-thaw			28.4 MPa
Retent. rate flexural strength		Freeze-thaw conditions	99.6 %
Flexural Modulus (MOE)		3 cycles:	3650 MPa
After freeze-thaw		1. Underwater, 24 h	3480 MPa
Retent. rate flexural modulus		2. -29 °C, 24 h 3. 23 °C, 24 h	95.3 %
Impact Resistance	ASTM D7031-11 sect. 5.12 ASTM D4495-00 (2005)	Mass of the falling weight: 4.5 kg	Mean Failure Height > 2 m Mean Failure Energy > 89 J
Water absorption	ASTM D1037-06a section 23 Method B	20 °C, 24 h, horizontal submersion	0.31%
Moisture content	ASTM D4442-07 Method A	drying: 103 °C, 51 h	0.35%
Taber abrasion	Ref. ASTM D4060-10	wheel: CS-17-5.000 cycles 500 g/wheel, total 1.000 g	Weight Loss: 208 mg Wear Index: 42
Rupture Modulus	Quality and Testing Specif. WPC terrace decking, version 2010-01-29 sect. 3.1	speed: 15 mm/min span: 460 mm	2621 N
Deflection at a load 500 N			1.79 mm
Sweeling in storage boiling water	Quality and Testing Specif. WPC terrace decking, version 2010-01-29 section 3.2	1. 100 °C, 5h 2. 18-22 °C, 15 min	Length: -0.15% Width: 0.05% Thickness: 2.2% Water Uptake: 0.62 %
Linear thermal expansion coefficient	ASTM D6341-10	1. -34.4°C, 48 h 2. 23 °C, 50% HR, 48 h 3. 60°C, 48 h	0.056 mm/mm°C
Creep Recovery	ASTM D7032-08 sec. 5.4	1. applied load 2. load, 24 h 3. removed load 4. after 24 h	Total Deflection: 0.94 mm Recov. Deflection: 0.79 mm Percent Recovery: 84 %
Oxidation Induction Time (OIT)	ASTM D3895-07	T ^a : 200 °C Oxygen: 50 ml/min	42.6 min

Slip Resistance Test

WPC Decking

Test Property	Test Method	Test Conditions	Result
Slip Resistance	UNE ENV 12633:2003	Wet Surface	Slip Resistance Coefficient Rd = 71 CLASS 3
	EN 14041-2004/AC:2006	Speed test: 0,26 m/s	Dynamic Coefficient of Friction: 0.34 CLASS DS

CLASSIFICATION UNE ENV 12633:2003

Considering the Technical Building Code, soils are classified according to their resistance to sliding or slipperiness.

This code indicates the required class to soils depending on its location.

Outdoors. Pools ⁽¹⁾	Class 3
---------------------------------------	----------------

(1) In areas planned for barefoot users and at the bottom of the vessels, in areas where the depth does not exceed 1.50 m.

Conclusion:

Class 3 soils have greater resistance to sliding coefficient of slipperiness $R_d > 35$. The higher class more secure is the soild, therefore the risk of falls by slipping will be lower.

CLASSIFICATION EN13893:2002

Tests conducted in dry conditions and uncontaminated area estimated that flooring must submit:

Dynamic Coefficient of Friction ≥ 0.30 (Class DS)

Conclusion:

The dynamic friction coefficient obtained is within the range settled and it is classified as Technical Class DS.

Fire Spread Test

Wood Plastic Composite

Test Property	Test Method	Test Conditions	Result
Reaction to Fire	ASTM E84-09	tunnel length: 25 ft	(1) Flame Spread: 90 (2) Smoke Developed:185

The test results are expressed in indexes which related to with the red oak flooring.

(1) Flame Spread along the time.

(2) Decrease of the light beam emitted by a photocell function of time.

Conclusion:

According to the results, the values are within normal range. The material is considered as normally-flammable and self-extinguishing according with Bunsen test.

Classification ASTM:

Flame Spread: 76 -200

Smoke Developed : 0-450

Substances Content

madera sintética

Substances	Directive	MDL ⁽⁴⁾	Result
(1) Pb/Hg/Cd/Cr VI/PBs/ PBDEs	2002/95/CE	1000 mg/Kg	N/D
(2) Organics and Inorganics	1907/2006/CE	0.005 - 0.1 %	N/D ⁽³⁾

(1) Restriction of Hazardous Substances Directive (RoHS) 2002/95/CE

(2) Candidate List of Substances of Very High Concern for authorization published by European Chemicals Agency (ECHA) Regarding Regulation 1907/2006/CE concerning REACH.

(3) N/D : No detected (< MDL)

(4) MDL: Method Detection Limit

Conclusion:

Limit substances non-existent or below the limit established according to specific rules for each type of substance.

The test is considered **PASS**.



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