

Product Data Sheet

General Description

Roctex is Australian developed and manufactured, it is used specifically in the design of decorative wall paneling for architectural applications.

ROCTEX is lightweight, hand-made using industry proven materials and is suited for interior and specified exterior applications, fitted horizontally or vertically.

The different range of profiles replicated the appearance of natural stone. It is affordable, simple and easy to install.

General Properties

ROCTEX panels feature the following properties:

High physical properties:

- High Tensile strength
- Above average flexibility
- High Impact strength
- Good elongation

Durability:

Resistance to flex, cracking and fatigue.

Weathering:

Excellent resistance to chalking, yellowing and water compared to other stone like products.

Heat and thermal shock:

Excellent performer in hot and cold weathers.

Extra Strength:

Fibreglass is used to combine both powder and binder and add extra strength resulting in making ROCTEX panels more resistant to impact for handling.

Mechanical Properties

Tensile and flexural:

Typical mechanical properties of standard ROCTEX at 20° and 65% relative humidity (RH)

Mechanical Properties	Unit	Average
Modulus of rupture in flexure	MPa	70
Limit of proportionality in flex	MPa	20
Strain of rupture in flexure	%	2.4
Tensile strength	MPa	34
Limit of proportionality in tensile	MPa	9
Modulus of elasticity (in tension)	*KN/mm ²	6
Strain at rupture in tensile	%	2

Two four-point bending tests have been performed as described in BS6432, Rilem technical committee 49TFR or ASTM (C-947) at a cross-head speed of 2m/min.

*N/mm² = MPa = Ca. 145 psi

Impact Resistance:

The impact resistance has been measured with a Charpy impact device for un-notched samples in accordance with Rilem recommendations of technical Committee 47TFR.

Typical Impact resistance properties of standard ROCTEX at 20° and 55% RH

Mechanical Properties	Unit	Average
Impact Strength	KJ/m ²	30

Durability:

Water Resistance

Accelerated aging tests using weather-o-meter were performed and show satisfactory results, only minor loss of mechanical strength and density is observed for samples when tested under the same conditions.

Mechanical properties of unprotected standard matrix after aging (tested in dry conditions)

Material Properties	Unit	Before Aging	After Aging		
			Weather-o-meter	Wet/dry cycles	Immersion in water
Modules of rupture	MPa	75	65	65	68
Limit of proportionality	MPa	25	20	27	23
Strain at rupture inflexure	%	2.5	-	2.7	2.5
Density (Dry)	Kg/L	1.5	1.4	1.32	1.46

Mechanical properties of matrix after outdoor exposure

Material Properties	Unit	Before aging	2.5 years without surface protection
Modules of rupture	MPa	75	51
Limit of proportionality	MPa	25	17
Strain of rupture	%	2.5	3
Density (Dry)	Kg/L	1.5	1.38

It is advised to apply special surface treatment like coatings or sealers to improve water and stain resistance.

Fire Resistance:

ROCTEX has been tested in accordance with AS 5637.1-2015. Testing was performed in accordance with AS/NZS 3837-1998 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter. The product has been classified under Product Group Number 1.

Panel Specifications:

Sizes: 600 X 1800 mm approx.

Sizes, colour and thickness may vary slightly as ROCTEX is handmade product.