

MANDALE FOSSIL LIMESTONE

TECHNICAL DATA

Density

The density of the stone is **2650 kg/m³**.

This would classify the material as a 'high density limestone'.

Water Absorption

The percentage water absorption is **0.27%**

The maximum water absorption limit for a 'high density limestone' is 3%.

Porosity and Saturation Coefficient

The porosity of the stone is **0.80**.

The saturation coefficient is **0.96**.

A saturation coefficient of less than 0.80 suggests that a stone may be susceptible to frost attack. However, this is normally only relevant to high porosity, whereas the value for this stone is low.

Flexural Strength

The flexural strength of the material is **12.4 Mpa**.

This figure provides a calculation for the minimum breaking load of a particular shape and thickness of a slab.

Modulus of Rupture

The modulus of rupture of an oven dried sample is **11.3 Mpa**.

The modulus of rupture of a saturated sample is **10.0 Mpa**.

The standard specification for limestone dimension stone gives a minimum modulus of rupture of 6.9 Mpa for 'high density limestone'.

Freeze-Thaw Loss

The percentage freeze-thaw loss is **0.1%**.

The test result suggests a frost resistant stone.

Salt Crystallisation Weight Change

The percentage loss in weight is **-0.19%**.

The result would classify the stone as limestone durability class A.

MANDALE FOSSIL LIMESTONE

Slip Resistance

The result for the dry slip resistance is **48**.

The result for the wet slip resistance is **28**.

Wet or dry values 35 to 65 are considered to be Low potential for slip.

Wet or dry values 25 to 35 are considered to be Moderate potential for slip.

Surface Roughness

The result for the surface roughness is **7.3um**.

This indicates that in certain circumstances a figure below 10 is considered to have a high potential for slip.

Abrasion Resistance

The result for the abrasion resistance is **16-mm**.

A result of this value showed the stone to be suitable for intensive use, for example shopping malls. The result would suggest the stone is suitable for areas where traffic will be approximately equal to a total of 500,000,000 visitors during the service life of the floor.

MANDALE FOSSIL LIMESTONE			
TECHNICAL DATA SHEET			
DENSITY		2650	kg/cum
WATER ABSORPTION		0.27	%
POROSITY		0.80	
SATURATION COEFFICIENT		0.96	
FLEXURAL STRENGTH		12.4	MP a
MODULUS OF RUPTURE	oven dried	11.3	MP a
	saturated	10.0	MP a
FREEZE THAW LOSS		0.10	%
SALT CRYSTALLISATION WEIGHT CHANGE		-0.19	%
SLIP RESISTANCE	Dry	48	
	Wet	28	
SURFACE ROUGHNESS		7.30	um
ABRASION RESISTANCE		16	mm