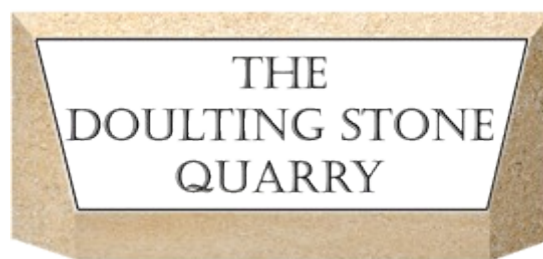


The Doulling Stone Quarry
 Chelynch Road
 Doulling
 Shepton Mallet
 Somerset BA4 4PZ



Performance

Technical Data Sheet Doulling Stone

Test Results - Doulling Limestone

Safety in Use

Slip Resistance ^(Note1)	n.d.	Values >40 are considered safe
Abrasion Resistance ^(Note1)	33	Values <23.0 are considered suitable for use in heavily trafficked areas

Strength Under Load

1) Compression ^(Note2)	12.6 MPa	Loaded perpendicular to the bedding plane ambient humidity
2) Bending ^(Note 1)	2.3MPa	Loaded perpendicular to the bedding plane ambient humidity
	n.d.	Loaded parallel to the bedding plane

Porosity and Water Absorption

	Doulling 1997	Doulling South 1999	Doulling Wood 1999
1) Porosity ^(note 3)	22.4%	19.02%	22.71%
2) Saturation Coefficient ^(Note 3)	0.74	0.70	0.78
3) Water Absorption	7.96% (by weight)	6.10% (by weight)	8.50% (by weight)
4) Bulk Specific Gravity	2091kg/m ³	2185 kg/m ³	2097 kg/m ³

Resistance To Frost

Freeze/Thaw Test ^(Note 5)	n.d.	n.d.	n.d.
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Resistance To Salt

Sodium Sulphate Crystallisation Test ^(Note 3)	47.01% Mean wt loss	1.77% Mean wt loss	20.78% Mean wt loss
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(Test methods Note 1 = EN1341, Note 2 = EN 1342, Note 3 = EN 1341 /BRE 141, Note 4 = BRE 141, Note 5= DIN 52 104)

Tests were carried out at BRE in 1997 and 1999. N.D. = not determined.

It is important that the results from the sodium sulphate crystallisation tests are not viewed in isolation. They should be considered with the results from the porosity and water absorption tests and the performance of the stone in existing buildings.

Stone from the Doultong area is traditionally used as building stone in the region and increasingly in many other towns and cities in the UK. The high water absorption and porosity indicate a very open stone that should have good resistance to weathering but it seems that the usual structure can result in some variability.

The sodium sulphate crystallisation result indicates that the stone will usually have moderate resistance to salt damage and that it will perform well in all but the most exposed locations where it may require some extra protection or careful design and detailing to shed water. However, some appears to have very good resistance to salt damage.

The strength is towards the lower end of the range for limestones but the performance should be satisfactory, if the relevant British Standards are followed.

The abrasion resistance is low and so the stone should only be used in lightly trafficked areas.