

HOPTON WOOD LIMESTONE



This data sheet was compiled by the Building Research Establishment (BRE). Where possible, data collected in earlier surveys has been used to help interpret the test results. The data sheet was compiled in March 2000 using the results of tests carried out to the proposed European Standards. The work was carried out by BRE as part of a Partners in Technology Programme funded by the Department of the Environment, Transport and the Regions and Hopton Wood Stone Sales Ltd and does not represent an endorsement of the stone by BRE.

Safety in Use

Slip Resistance (Note 1)	57	Values > 40 are considered safe. Note: Polished surfaces are usually around 15-20 when wet.
Abrasion Resistance (Note 1)	N.D.	Values <23.0 are considered suitable for use in heavily trafficked areas

Strength under load

1) Compression (Note 2)	119.8 MPa	Loaded perpendicular to the bedding plane ambient humidity
2) Bending (Note 1)	11.7 MPa	Loaded perpendicular to the bedding plane ambient humidity
	12.0 MPa	Loaded parallel to the bedding plane ambient humidity

Porosity and Water Absorption

1) Porosity (Note 3)	7.6%	
2) Bending (Note 1)	0.60	
3) Water Absorption	1.81 % (by wt)	
4) Bulk specific gravity	2504kg/m3	

Resistance to Frost

Freeze/Thaw Test (Note 1)	N.D.	Loaded perpendicular to the bedding ambient humidity
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Resistance to Salt

Sodium Sulphate Crystallisation Test (Note 3)	0.20% Mean wt loss	
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General

The quarry is on Brassington Moor near Matlock. The stone is used for walling, architectural details, paving, flooring and sculpture. The depth on bed is around 800mm. The maximum size quarried is 1500 x 800 x 800mm. There are old quarries in the area and Hopton Wood was used extensively in the past. There are very large reserves of the stone.

Petrography

Hopton Wood is of early Carboniferous age. The stone is usually cream or grey and many attractive fossils are present.

Expected Durability and Performance

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 this area is traditionally used as architectural details (for example columns) and paving. The crystallisation test results show the stone to be Class A which BRE Report 141 suggest is suitable for most uses and that it should have good resistance to both salt and frost. Based on current research it seems likely that the stone would weather at a rate of between 1 and 2 mm per 100 years but it could be greater in severe exposures or on the edges of stonework. The strength is at the top end of the range for limestones.



Quarry Location

**Brassington Moor,
Brassington,
Matlock,
Derbyshire**

RGB Landscapes

**Ropewalk House,
2 Cottage Terrace,
Nottingham,
NG1 5DX**

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(Test methods Note 1 = EN1341, Note 2 = EN 1342, Note 3 = EN 1341 /BRE 141, Note 4 = BRE 141)