



Flash Sandstone

Technical Data Sheet

Flash Sandstone

Matlock, Derbyshire

Bolehill Quarry, Wingerworth, Derbyshire, S42 6RG

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Grid reference : -- --

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This data sheet was compiled by the Building Research Establishment (BRE)., The data sheet was compiled in November 1997 and updated in June 2000 using BRE test results and data collected in earlier surveys. 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 Blockstone Ltd and does not represent an endorsement of the stone by BRE.

General

The quarry is near the town of Matlock in Derbyshire. This is new building stone quarry.

Petrography

Flash Sandstone is a Millstone Grit of Carboniferous age. It is a medium-grained stone, light buff or cream in colour with some veining. The average block size is 1000mm x 600mm 500mm.

Expected Durability and Performance

It is important that the results from the individual tests are not viewed in isolation. They should be considered together and compared to the performance of the stone in existing buildings and other uses. Carboniferous Sandstones are traditionally acknowledged as generally being a very durable building and paving stone and have been used extensively in many towns and cities in the UK. Flash Sandstone appears to be a durable stone that is not effected by acid rain or air pollution. Most sandstones have good frost resistance. The compressive strength of the stone is typical of the range for sandstones and is comparable with the stronger UK limestones.

Overall, Flash Sandstone should be suitable for use in most aspects of load bearing masonry and cladding.

Test Results – Flash Sandstone

Safety in Use		
Slip Resistance ^(Note 1)	Not determined	Values > 40 are considered safe.
Abrasion Resistance ^(Note 1)	Not determined	Values <23.0 are considered suitable for use in heavily trafficked areas
Strength under load		
1) Compression ^(Note 2)	64.2 MPa	Loaded perpendicular to the bedding plane ambient humidity
2) Bending ^(Note 1)	5.4 MPa	Loaded perpendicular to the bedding plane ambient humidity
	2.5 MPa	Loaded parallel to the bedding plane ambient humidity

Porosity and Water Absorption		
1) Porosity ^(Note 3)	17.8%	
2) Saturation Coefficient ^(Note 3)	0.58	
3) Water Absorption	4.80 % (by wt)	
4) Bulk specific gravity	2170kg/m ³	
Resistance to Frost		
Freeze/Thaw Test ^(Note 1)	Not determined	
Resistance to Salt		
Sodium Sulphate Crystallisation Test ^(Note 3)	3.21% Mean wt loss	
Resistance to Acidity		

Acid Immersion Test ^(Note 4)	Pass	All samples passed the test with no splitting or delamination
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(Test methods Note 1 = EN1341, Note 2 = EN 1342, Note 3 = EN 1341 /BRE 141, Note 4 = BRE 141)

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