



Shire Sandstone

Technical Data Sheet

Shire Sandstone

Shire Hill Quarry

Bolehill Quarry, Wingerworth, Derbyshire, S42 6RG

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Grid reference : -- --

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General

The quarry is in Derbyshire, near to the town of Glossop. Shire Hill quarry is operated by Blockstone Ltd. on the behalf of Marchington Stone Ltd.. Shire Hill stone is supplied as random block with sizes up to 2 x 1 x 1 m. The quarry has plenty of reserves.

Petrography

Shire Sandstone is of Carboniferous age from the Mill stone grit series (Namurian). It is a medium – grained hard stone, buff to grey in colour with some clay holes present. The average block size is 1500mm x 800mm 800mm.

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. Shire Hill Sandstone appears to be a durable stone that is not effected by acid rain or air pollution and like most sandstones it is expected have good frost resistance. The small weight loss in the harsh saturated sodium sulphate crystallisation test indicates good resistance to salt damage (for example in coastal locations or from de-icing salts). The compressive and flexural strength of the stone is towards the upper end of the range for sandstones.

Overall, Shire Hill should be suitable for use in most aspects of construction including flooring, paving, load and bearing masonry. The stone is suitable for

areas where a long service life is needed. The stone is mostly used for paving, walling, ashlar, steps, heads, sills, jambs, mullions and lintels.

Test Results – Shire Hill

Safety in Use		
Slip Resistance ^(Note 1)	76 (dry)	Values > 40 are considered safe.
Abrasion Resistance ^(Note 1)	Not determined	Values <23.0 are considered suitable for use in heavily trafficked areas. Note: A value of 11.3cm ³ /50cm ² was obtained using the DIN 52 108 test.
Strength under load		
1) Compression ^(Note 2)	77 MPa	Loaded perpendicular to the bedding plane ambient humidity
2) Bending ^(Note 1)	9.5 MPa	Loaded perpendicular to the bedding plane ambient humidity

Porosity and Water Absorption		
1) Porosity ^(Note 3)	No results available	
2) Saturation Coefficient ^(Note 3)	0.75	
3) Water Absorption (at atmospheric pressure)	2.5 % (by wt)	
4) Bulk specific gravity	2490kg/m ³	
Resistance to Frost		
Freeze/Thaw Test ^(Note 1)	Not determined	Note: the stone Passed Test B using DIN 52 104
Resistance to Salt		
Sodium Sulphate Crystallisation Test ^(Note 14) (saturated)	3% 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, Note 5 = ASTM.

All based on data supplied by the producer)