

Technical Data Sheet

Woodkirk Sandstone

General

The quarry is just to the north of the point at which the A6029 crosses the M62 motorway to the south of Morley. Stone has been quarried in this area since the 18th century. This particular quarry has been worked since the 1930s. The quarry is large with a number of faces and also a number of different beds. There are plenty of reserves. The stone is used for walling and paving. The depth of the stone varies between beds but most are between 1200mm and 2400mm in blocks weighing up to 12 tonnes.

Petrography

Woodkirk sandstone is from the Coal Measures of Carboniferous age. It is a fine-grained stone, grey- buff to light brown in colour but it tends to darken to a richer colour as it ages.

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. 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. Woodkirk appears to be a durable stone but its failure in the acid immersion test indicates limited resistance to acid rain or air pollution. The results of the crystallisation test indicate that it should have good resistance to salt under normal conditions but the high weight loss in an earlier harsh saturated sodium sulphate crystallisation test indicates susceptibility to salt damage (for example in coastal locations or from de-icing salts). Like most sandstones it seems to have good frost resistance. The compressive strength of the stone is typical of the range for sandstones and is comparable with the strongest UK limestones.

The stone has a good slip resistance and the abrasion resistance for the harder stone indicates that it should be suitable for use in intensively trafficked locations.

Overall, Woodkirk should be suitable for use in most aspects of load bearing masonry, cladding and paving but should not be used in areas where it will be subjected to acidic conditions or locations with high salt concentrations.

Test Properties Result

Water Absorption 4%

Flexural Strength 10.66 MPa

Freeze/Thaw Freeze thaw test indicates that failure because of frost action is unlikely

Unpolished Slip Resistance 82 (dry)

Compressive Strength 54 N/mm²

Apparent Density 2460 Kg/m³

• Please note that sandstone is a natural product and all results are indicative and subject to variation

Description A Carboniferous Sandstone, fine grained and very durable with good weathering Properties.

Colour Grey/Buff when newly quarried, weathers into buff/brown