

Aggregates for mortar

Implementation day 1 January 2004

Introduction

Bulletin 1 of this series of information sheets gave a general introduction to the changes that all producers, specifiers and users of aggregates will need to be familiar with once the European Standards are adopted as from 1 January 2004.

For aggregates for mortar the product standard is BS EN 13139 with the supporting National Guidance given in PD 6682-3. The importance of the National Guidance cannot be over emphasised since it identifies the critical details of the common European product standard and highlights how it should be applied in the UK.

Particular guidance on the relevant test methods is given in PD 6682-9.

The following issues will be of particular interest to all producers, specifiers and users.

Scope

The European product standards include materials from recycled and manufactured sources as well as natural materials.

General

BS EN 13139 significantly extends the requirements of BS 1199/1200 as illustrated in PD 6682-3.

Aggregate sizes

As described in BS EN 13139 aggregate sizes are expressed in terms of "d/D" with the guidance given in PD 6682-2 providing a table of recommended sizes that best match current

production. For example, BS 1200 Type S becomes 0/2. Note that 4mm replaces 5mm as the break point between fine and coarse aggregate.

Gradings

PD 6682-3 sets out the recommended sieves for use in the UK and thus steers all parties to the use of common sizes, avoiding unnecessary confusion.

The new grading procedure places greater emphasis on "consistency of product" and is based on the declaration of the producers "typical" grading with controlling tolerances and overall requirements on designated sieves. This represents a move away from a rigid compliance envelope and the risk of wide variations during supply.

Additionally, the coarseness/fineness of the fine aggregate is assessed against the percentage passing the 0.500mm sieve to give the coarse/medium/fine designation. The alternative method of assessment - fineness modulus (FM) - will not be used in the UK.

Particles shape

Particle shape is not normally relevant to fine aggregate and is not expected to be a UK requirement.

Shell content

Shell content is not normally relevant to fine aggregate and there are no specification requirements or appropriate test method.

Fines content

BS EN 13139 gives clear requirements to the percentage passing the 0.063mm sieve related to material type and end use.

Fines quality

The two new tests for fines quality, sand equivalent and methylene blue, are not considered sufficiently precise by the UK for the assessment of harmful fines (clay) content and it is recommended that the existing approach of complying with the fines content limit or evidence of satisfactory use is maintained.

Resistance to freezing and thawing

This requirement for fine aggregate has not previously been necessary for the UK and it should not, therefore, be demanded.

CE marking

The new product standard sets out the minimum requirements for a factory production control system, declaration of conformity of the essential requirements and hence CE Marking. Attestation Level 4 is applicable to aggregates for mortar.

Note

This bulletin sheet does not replace the relevant product standard - BS EN 13139 - or the National Guidance Documents - PD 6682-2 and PD 6682-9 - and aims to give introductory information only.

Further information can be obtained from **QPA** at the address below.

BS EN 13139: 2002

Aggregates for mortar

BS EN 6682-2: 2003

Aggregates - Part 3 Aggregates for mortar - Guidance on the use of BS EN 13139

PD 6682-9: 2003

Aggregates - Part 9: Guidance on the use of European test method standards

All documents are available from

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