

# Product Performance Testing Methodology

Edition: 01 March 2020

## Requirements and Test Methods for Concrete Paving Flags

### Description:

The materials, properties, requirements and test methods for unreinforced cement bound concrete paving flags and complementary fittings are selected and determined in accordance with BS EN 1339:2003. It is applicable to precast concrete paving flags and complementary fittings that are for use in trafficked paved areas and roof coverings.

### Concrete paving flag

Precast concrete unit used as a surfacing material that satisfies the following conditions:

- its overall length does not exceed 1 m;
- its overall length divided by its thickness is greater than four

### Performance Requirements:

- Permissible Deviations:

The dimensions and deviations shall be measured according to annex C.

Flag work dimensions  $\leq$  600 mm: Length  $\pm$  2mm; Width  $\pm$  2mm; Thickness  $\pm$  3mm

Flag work dimensions  $>$  600 mm: Length  $\pm$  3mm; Width  $\pm$  3mm; Thickness  $\pm$  3mm

- Weathering Resistance – Water Absorption:

The weathering resistance is determined by tests according to annex E for water absorption.

Class 2 – The mean water absorption shall not be more than 6% by mass.

- Flexural Strength or Bending Strength:

The characteristic bending strength shall be determined by testing according to annex F.

The characteristic bending strength shall not be less than 5.0 MPa and minimum bending strength shall not be less than 4.0 MPa.

- Abrasion Resistance:

Abrasion resistance is determined by the Wide Wheel Abrasion test (annex G), or as an alternative by the Böhme test (annex H). The Wide Wheel Abrasion test is the reference test.

When tested in accordance with the Wide Wheel Abrasion Test Method:

No individual test result shall greater than 20 mm – Class 4

No individual test result shall greater than 23 mm – Class 3

When tested in accordance with the Böhme Test Method:

No individual test result shall greater than  $18000 \text{ mm}^3/5000 \text{ mm}^2$  – Class 4

No individual test result shall greater than  $20000 \text{ mm}^3/5000 \text{ mm}^2$  – Class 3

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**Note:**

In areas subject to very heavy pedestrian and vehicular traffic Class 4 products should be used.  
In areas subject to normal pedestrian and vehicle use, e.g. public pavements etc., at least Class 3 products should be used.

- **Slip/Skid Resistance:**

If in an exceptional case a value for slip/skid resistance is required, the test method as described in annex I shall be used and the minimum slip/skid resistance value shall be declared.

Pendulum test value of 40 to 74 indicates low potential for slip

Pendulum test value above 75 indicates extremely low potential for slip