

Understanding the new SANS standard and amendments for concrete paving blocks

The most important aspects of the amendment is the fact the tensile splitting strength test and abrasion test compliances have been modified. It is vitally-important that the new SANS 1058:2012 standard and amendments are effectively communicated to the industry and to testing laboratories, as some manufacturers are struggling to consistently meet the criteria for compliance.

SANS 1058 - What has changed?

Now (SANS 1058 :2012 Edition 2.1 - Amendment)	Class 30/2.0	Class 40/2.6
Was (SANS 1058 :2010 Edition 2)	Class I	Class II
Previous (SANS 1058: 2006)	Class 25 (25MPa)	Class 35 (35MPa)

Under the SANS 1058:2012 specifications, the previous Class 25 SANS 1058:2006 standard, which was based on a compressive strength rating of 25 MPa, with the amendment is now recognised as Class 30/2,0. The previous Class 35 SANS 1058:2006 standard, based on a compressive strength rating of 35 MPa, with the amendment is now recognised as Class 40/2,6. This amendment became official in February 2012.

According to the Concrete Manufacturers Association (CMA), Class 30/2,0 is officially rated at 2,0 MPa tensile strength, and is indicative of a compressive strength rating over 30MPa. Class 40/2,6 is rated at 2,6 MPa tensile strength, and approximates a compressive strength rating over 40 MPa.

The two strength ratings within the standard have been renamed for greater clarity. The SANS 1058:2010/2012 standard includes two new performance measurement techniques, namely tensile splitting and abrasion testing. This sets a higher quality benchmark and is more comprehensive than the SANS 1058: 2006 standard it replaced, as research has shown that paving blocks are rarely crushed under load. Abrasion, cracking and break-up are the main causes of paving failure.

The amended standard SANS 1058:2012 restricts the average mass loss per block to 15g after being pounded by 600 16g ball bearings for 60 minutes in a rotating steel box.

A water absorption test had been included in the original SANS 1058: 2010, although the requirement has been left out of the amended SANS 1058:2012, it remains as an informative and voluntary part of the standard according to the CMA.

The SANS 1058:2012 standard, therefore attempts to replicate an accelerated and more accurate performance of paving bricks, whereas the previous SANS 1058:2006 testing method was more focused only on compression strength testing, which does not suitably simulate the real conditions that pavers are exposed to in everyday applications.