

CLASSIFICATION AND BSI TEST RESULTS

Classification of Road Studs

Road studs in the UK are tested against a 2 part European standard: EN 1463-1:1998 and EN 1463-2:2000. (see full explanation in Sales Guide)

- Part 1 determines the classification type and then what minimum levels of reflectivity are correspondingly required in BSI lab testing; and
- Part 2 is the 12 month road trial which determines the level of road presence and the levels of retained reflectivity after 12 months.

The Part 1 portion of EN 1463 standard bases the minimum reflectivity requirements of a road stud on *what material the reflector is made from*, and then classifies it as a Type 1, 2, or 3. For example, road studs made with glass reflectors (Type 1) have a much lower minimum reflectivity requirement than road studs reflectors made with other materials, such as plastic (Type 2 or Type 3). The road stud is measured in three different entrance and observation angles.

The other section of Part 1 classifies whether the road stud is a Non-Depressible stud (called "A"), or a Depressible stud (called "B").

Summary of Part 1 specifics from EN 1463-1 1998

Reflector material	Typical type of road stud like this	Minimum requirement level of reflectivity in a head-on geometry
Glass = Type 1	A glass beaded depressible, i.e. Light Dome or Reflecting Road Studs	20 mcd/lux
Plastic with abrasion resistant layer = Type 3	A surface applied stud like 3M 290 or Stimsonite 953	150 mcd/lux (7.5 times higher than Type 1)

Part 2 of the EN1463 standard deals with road presence and how much reflectivity is retained after being in the road trial for 12 months as compared to the minimum requirement. The road presence is identified by the classification S1, S2, S3, and retained reflectivity R1, R2, R3.

BSI Test Results for the 590 Road Stud

Classification of the 590 road stud: **P3B**

P = permanent road stud (i.e. not a temporary stud)

3 = A Type 3 road stud (a plastic reflector with an abrasion resistant layer)

B = a depressible road stud

Results from 12 month road trial:

S1 = highest level of road presence

R2 = second highest level of retained reflectivity (*see further document in sales guide detailing the R2 level*)

Thus glass beaded road studs are classified as Type 1 and Depressible, whereas the 590 road stud is classified as **Type 3** and Depressible.

Conclusion

As the 590 road stud has been classified as a Type 3 by BSI – it means it meets the minimum reflectivity requirements for a Type 3 road stud, which in a head-on geometry is 7.5 times higher than the minimum requirement for glass beads. And thus meets a minimum level of reflectivity usually applied only to surface mounted road studs.

Evidence of Authorisation to Use the 590 road stud

The 590 appears in the following document

PART 1

SA 1/05 - AMENDMENT NO. 2 - MAY 2006

LISTS OF COMPLIANT/APPROVED/REGISTERED PRODUCTS

This document lists products which comply with the Traffic Signs Regulations and General Directions 2002, direction 57 or have obtained Statutory Type Approval, Type Approval and Registration in order that they can be used on the Highways Agency's road network.

Ireland has in the past relied on the UK approval of road studs in determining authorisation to use, and this Declaration of Test Results can be given to Irish customers.