

## BS EN 1935:2002 – Building Hardware – Single Axis Hinges

Products tested to British and European standards provide greater durability, longer warranty periods, peace of mind and evidence of professional specification.

Under the standard each product is tested and classified accordingly to show its compliance.

The identification of an 8-digit code is visible on the individual product. Each digit represents a category and how it measured against the standard to which it was tested.

The standard specifies requirements for single-axis hinges for windows and doors opening only in one direction whose rotation axis is no more than 30mm from the face of the sash or door. It covers fixed pin and lift-off hinges.

### Digit 1: Category of duty

- 1 = light duty
- 2 = medium duty
- 3 = heavy duty
- 4 = severe duty

### Digit 2: Durability

- 3 = 10,000 test cycles, for light duty hinges on windows.
- 4 = 25,000 test cycles, for light duty hinges on windows and doors.
- 7 = 200,000 test cycles, for medium, heavy and severe duty hinges on doors only.

### Digit 3: Test door mass

Test door mass grade	Door mass
0	10kg
1	20kg
2	40kg
3	60kg
4	80kg
5	100kg
6	120kg
7	160kg

### Digit 4: Suitability for fire/smoke door use

- 0 = not suitable for fire/smoke resistance door assemblies.
- 1 = suitable for fire/smoke resistance door assemblies subject to satisfactory assessment of the contribution of the single-axis hinge to the fire resistance of special fire/smoke door assemblies, which is outside the scope of this standard.

### Digit 5: Safety

Single-axis hinges are required to satisfy the essential requirements of safety in use. Therefore, only grade 1 is identified.

### Digit 6: Corrosion resistance

- 0 = no defined corrosion resistance.
- 1 = mild resistance.
- 2 = moderate resistance.
- 3 = high resistance.
- 4 = very high resistance.

**Digit 7: Security**

0 = no security

1 = suitable for applications requiring a degree of security.

**Digit 8: Hinge grade**

A summary of the 14 grades are listed in the table below, the full classification can be found in the full standard.

Hinge grade	Window/door	Test cycles	Door mass
1	Window	10,000	10kg
2	Window	10,000	20kg
3	Window/door	25,000	20kg
4	Door	200,000	20kg
5	Window	10,000	40kg
6	Window/door	25,000	40kg
7	Door	200,000	40kg
8	Window	10,000	60kg
9	Window/door	25,000	60kg
10	Door	200,000	60kg
11	Door	200,000	80kg
12	Door	200,000	100kg
13	Door	200,000	120kg
14	Door	200,000	160kg

**Example:**



The above code signifies a single-axis hinge for use in medium duty situations, tested to 200,000 cycles, for use on doors with a mass up to 60kg, with stated fire door suitability, high corrosion resistance, suitable for burglar-resistant doors, and with a hinge grading of 10.

**Marking**

This standard requires that each single-axis hinge manufactured to the standard be marked with the following:

a: manufacturer's name or trademark, or other means of identification.

b: the hinge grade.

c: number of this European standard.

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