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# International Standard



# 8270

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Doorsets — Soft heavy body impact test

*Blocs-portes — Essai de choc de corps mou et lourd*

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Descriptors : doors, door frames, tests, impact tests.

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8270 was prepared by Technical Committee ISO/TC 162, *Doors and windows*.

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# Doorsets — Soft heavy body impact test

## 1 Scope and field of application

This International Standard specifies a soft heavy body impact test for doorsets.

It applies to doorsets with one or two leaves, as supplied ready for installation, and including:

- the leaf (or leaves);
- the door frame with its means of connection to the wall;
- the associated hardware (closing mechanism, pivoting mechanism, or other special systems).

## 2 Reference

ISO 1804, *Doors — Terminology*.

## 3 Definitions

For the purposes of this International Standard, the definitions given in ISO 1804 apply.

## 4 Principle

Striking one face of the door leaf, in a predetermined position or in positions which appear to be vulnerable, with a soft heavy body, perpendicularly to the plane of the door leaf, and examination to detect any damage.

## 5 Apparatus

The apparatus is shown in the figure and comprises the following.

**5.1 Adjustable test rig**, in which doorsets of various sizes can be mounted in a manner similar to their installation in

practice. The rig shall be sufficiently rigid so that any deformations that occur in the rig during testing will have a negligible effect on the test results.

**5.2 Impact body**, of total mass 30 kg, consisting of a spherical leather bag of diameter approximately 350 mm, containing sand of apparent density approximately 1 500 kg/m<sup>3</sup> (sand which passes through a sieve of aperture size 2 mm).

**5.3 Wires, wheels, snap-hook and regulating devices.**

## 6 Procedure

If possible, measure deviations from planarity before and after the test. The principle of the test is illustrated in the figure.

Release the impact body, which shall be in a vertical position at the start of the test, and allow it to strike the doorset. Repeat this operation as many times as required, and, if desired, from different drop heights. Examine the doorset for damage.

## 7 Test report

The test report shall include the following information:

- a) relevant details concerning the material, type, dimensions, form, construction and finish of the door and of its frame, and a description of the hardware used;
- b) the number of drops;
- c) the drop height (or heights) at which the test was carried out;
- d) the face(s) tested and the location(s) of the position(s) of impact;
- e) details of damage resulting from the test, including the nature, location (face) and severity of such damage;
- f) test atmosphere (temperature and relative humidity).