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# International Standard



# 7390

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

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## Building construction — Jointing products — Determination of resistance to flow

*Construction immobilière — Produits pour joints — Détermination de la résistance au coulage*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

International Standard ISO 7390 was developed by Technical Committee SO/TC 59, *Building construction*, and was circulated to the member bodies in November 1981.

It has been approved by the member bodies of the following countries :

Australia	Germany, F. R.	Poland
Belgium	Hungary	Portugal
Brazil	India	Romania
Canada	Iraq	South Africa, Rep. of
Czechoslovakia	Ireland	Spain
Denmark	Israel	Sweden
Egypt, Arab Rep. of	Japan	Thailand
Ethiopia	Korea, Rep. of	USSR
Finland	Netherlands	
France	Norway	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Italy  
United Kingdom

# Building construction — Jointing products — Determination of resistance to flow

## 1 Scope and field of application

This International Standard specifies a method for the determination of resistance to flow of sealants to be used in joints of vertical surfaces in building construction.

## 2 Reference

ISO 6927, *Building construction — Jointing products — Sealants — Vocabulary.*

## 3 Test method

### 3.1 Principle

Exposure of samples of the sealant to be tested, filled in aluminium U-profiles, for a defined time to various defined temperatures with the surface of the sealant in a vertical position. Measurement of the flow of the sealant out of the U-profiles at the end of the testing time.

### 3.2 Apparatus

**3.2.1 U-profiles of non-anodized aluminium alloy**, with a length of  $150 \pm 0,2$  mm, with both ends open and the back surface at one end extended by  $50 \pm 0,5$  mm, having a cross-section with the following internal dimensions :

- a) width  $10 \pm 0,2$  mm, depth  $10 \pm 0,2$  mm, or
- b) width  $20 \pm 0,2$  mm, depth  $10 \pm 0,2$  mm.

### 3.2.2 Polyethylene sheet.

**3.2.3 Convection type oven**, capable of operating at  $70 \pm 2$  °C.

**3.2.4 Convection type oven**, capable of operating at  $50 \pm 2$  °C.

**3.2.5 Refrigerated container**, controlled at  $5 \pm 2$  °C.

**3.2.6 Rule**, with scale in millimetres.

### 3.3 Preparation of test specimens

The two U-profiles<sup>1)</sup> (3.2.1) are assembled according to the figure and set up on a polyethylene sheet (3.2.2). The delimited volume is filled with sealant, previously conditioned for 24 h at  $23 \pm 2$  °C.

The following precautions shall be taken :

- a) avoid the formation of air bubbles;
- b) press the sealant on the inner profile surfaces;
- c) trim the sealant surface so that it is flush with the face and the ends of the U-profile.

### 3.4 Procedure

For each test temperature of 70, 50 and 5 °C, three test specimens shall be used. The test specimens shall be tested either according to procedure A (see 3.4.1) or according to procedure B (see 3.4.2), or both of them, as agreed upon.

#### 3.4.1 Procedure A

Each test specimen, immediately after the preparation, shall be placed in the oven (3.2.3 or 3.2.4) or in the container (3.2.5) in a vertical position with the extensions of U-profiles at the bottom (see figure 1). It shall be submitted for 24 h to each test temperature and then removed from the oven and the container. The distance that the bottom edge of the sealant of each test specimen has moved downward along the extended back surface of the U-profile shall be measured in a vertical direction with the rule (3.2.6).

#### 3.4.2 Procedure B

Each specimen, immediately after the preparation, shall be placed in the oven (3.2.3 or 3.2.4) or in the container (3.2.5) in an horizontal position with the open sealant surface in a vertical plane (see figure 2). It shall be submitted for 24 h to each test temperature and then removed from the oven and the container. The distance that the sealant has projected beyond the front of the U-profile of each test specimen shall be measured in a horizontal direction with the rule (3.2.6).

1) The U-profiles shall be first cleaned with methyl ethyl ketone or similar solvent, then cleaned with a detergent solution and finally rinsed with distilled water and air dried.

#### 4 Test report

The test report shall contain the following information :

- a) a reference to this International Standard;
- b) name and type of sealant;
- c) batch of sealant from which the test specimens were produced, if possible;
- d) inside dimensions of U-profiles according to 3.2.1;

e) applied test procedure according to 3.4;

f) flow of the sealant of each test specimen in millimetres, rounded to the nearest 1 mm, measured in accordance with the applied test procedure and stated with the test temperature applied;

g) the arithmetic mean of the flow of the test specimens of the same test temperature and the same procedure;

h) any operations not specified in this International Standard which might have affected the results.

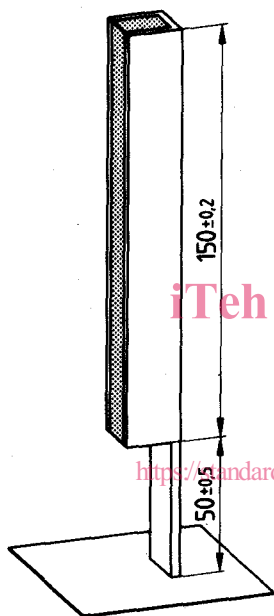


Figure 1 — Test specimen, position for procedure A

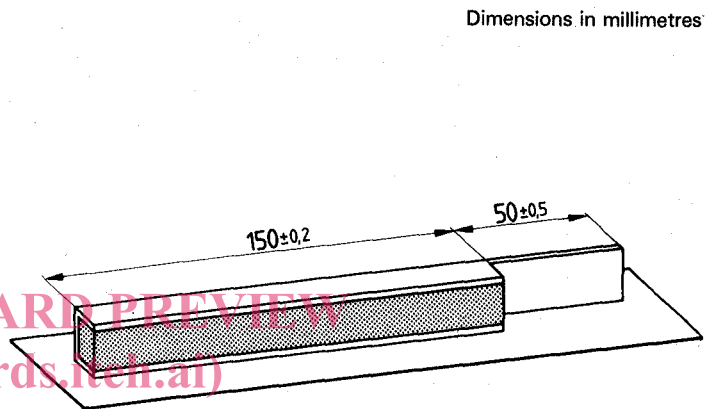


Figure 2 — Test specimen, position for procedure B

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