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Building construction — Jointing products — Determination of extrudability of one-component sealants

iTeh STANDARD PREVIEW

*Construction immobilière — Produits pour joints — Détermination de l'extrudabilité des
mastics à un composant*

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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 8394 was prepared by Technical Committee ISO/TC 59, *Building construction*.

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Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Building construction — Jointing products — Determination of extrudability of one-component sealants

1 Scope and field of application

This International Standard specifies a method for determining the extrudability of one-component sealants from the packages in which they are usually supplied for direct application to a building joint.

This method is only to be used for testing the workability of a solvent; it is not to be used for classifying sealants.

2 Reference

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

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 6927 apply.

4 Principle

Extrusion of the sealant under defined conditions from the package in which it is supplied by the manufacturer into water by means of compressed air. Reporting of the extrudability as extruded volume in a defined time.

5 Apparatus

5.1 Pneumatically operated extrusion gun, used for applying the sealant at the building site as recommended by the sealant manufacturer.

5.2 Supply of compressed air, with valve and pressure gauge for maintaining the supply of compressed air at 250 ± 10 kPa and with an appropriate connection to the extrusion gun.

5.3 Graduated measuring glass cylinder, of 1 000 ml capacity.

5.4 Temperature-controlled container, capable of holding the packages to be tested and of operating at 5 ± 1 °C and 23 ± 1 °C.

5.5 Stop-watch, calibrated in seconds.

5.6 Extrusion nozzle, with an orifice of $5 \pm 0,3$ mm diameter, for packages supplied without nozzle.

6 Conditioning of packages

The packages to be tested shall be conditioned in the container (5.4) at 5 ± 1 °C and at 23 ± 1 °C for at least 24 h before testing.

7 Preparation of packages

7.1 Rigid cartridges with fitted nozzle

The nozzle (5.6) shall be cut to give an orifice of $5 \pm 0,3$ mm diameter. The internal membrane between nozzle and cartridge shall be punctured completely.

7.2 Rigid cartridges without fitted nozzle

The end of the threaded nipple on the cartridge shall be cut off to give the largest practicable orifice of not less than 6 mm diameter. The nozzle shall then be fitted to the cartridge.

7.3 Thin film packages

The end of the package to which the nozzle is to be fitted shall be cut so as to allow the sealant to flow freely into the nozzle. Package, nozzle and extrusion gun shall be fitted together properly.

8 Procedure

The test shall be carried out at usual laboratory room temperature (18 to 23 °C approximately) with 3 packages conditioned at 5 ± 1 °C and 3 packages at 23 ± 1 °C.

Immediately after taking the package from the container, prepare it in accordance with clause 7 and insert it in the extrusion gun (5.1) following the manufacturer's instructions. Raise the air supply to 250 kPa and extrude sufficient sealant from the package to fill the nozzle completely and to remove any air trapped at the end of the package. Then close the air supply valve.

Allow about 600 ml of deionized or distilled water into the graduated glass cylinder (5.3) and place the extrusion gun with the package vertically above the cylinder with the tip of the nozzle immersed approximately 12 mm in the water.

After checking that the air supply pressure is 250 ± 10 kPa, extrude sealant for a few seconds to ensure that it is flowing freely from the orifice. Then read the level of water in the graduated glass cylinder for the first time. Extrude the sealant into the water for a measured period of time, so that at least 200 ml of water is displaced. Read the level of water for the second time. The difference between the two level readings is the extruded volume of sealant.

Calculate the extrusion rate of each package in millilitres per minute from the volume of extruded sealant and the time for extrusion.

9 Test report

The test report shall include the following information:

- a) reference to this International Standard;
- b) name and type of sealant;
- c) batch of sealant from which the packages were taken and the characteristics of the packages;
- d) maximum, minimum and arithmetic means of extrusion rate for each of the conditioning temperatures;
- e) any deviation from the specified test conditions.

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