International Standard 8273

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Doors and doorsets — Standard atmospheres for testing the performance of doors and doorsets placed between different climates

Portes et blocs-portes — Atmosphères normales d'essais de performance des portes et blocs-portes situés entre des climats différents

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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.

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 8273 was prepared by Technical Committee ISO/TC 162, *Doors and windows.*

Doors and doorsets — Standard atmospheres for testing the performance of doors and doorsets placed between different climates

0 Introduction

The effect of humidity and/or temperature on the material constituting a door or doorset may cause changes in the shape and dimensions of the door or doorset when exposed to different climates on each side. Insufficient hygrothermal stability will affect the performance of a door or doorset, such as with respect to air penetration, sound insulation and operating force.

The purpose of this International Standard is to establish standard atmospheres to be used when various performance tests are carried out on doors and doorsets that may be exposed to different climates on each side.

1 Scope

This International Standard specifies standard atmospheres for four climate categories to be used when testing the performance of doors and doorsets.

2 Field of application

This International Standard applies to the testing of external and internal doors and doorsets that may be exposed to different climates on each side, and where the effects of the climates on the performance of the doors and doorsets are to be measured.

The standard atmospheres apply to doors and doorsets in ordinary buildings and houses, but do not apply to doors and doorsets in rooms with special atmospheres (such as doors to freezing rooms, etc.).

3 Specifications

3.1 Preconditions

Before being exposed to one of the standard atmospheres, doors and doorsets shall normally be preconditioned in an atmosphere having a temperature of 23 ± 2 °C and a relative humidity of 50 ± 5 % for the time required to reach approximate temperature and moisture content equilibrium.

3.2 Standard atmospheres

See the table.

The duration of exposure should normally be given in performance requirements for doors and doorsets. If this is not stated, the standard exposure time shall be 28 days. However, a test may be stopped after a shorter time if measurements show that equilibrium conditions have been attained.

The average values of temperature and relative humidity shall be maintained as close as possible to the nominal values, the tolerances being allowed for control purposes only.

Table

Climate category	Standard atmosphere			
	Side 1		Side 2	
	Temperature, °C	Relative humidity, %	Temperature, °C	Relative humidity, %
I	23 ± 2	30 ± 5	18 ± 2	50 ± 5
II	23 ± 2	30 ± 5	13 ± 2	65 ± 5
III	23 ± 2	30 ± 5	3 ± 2	85 ± 5
IV	23 ± 2	30 ± 5	3 ± 2 plus 24 h at −20 °C at the end of the exposure period (no requirement for humidity).	85 ± 5