International Standard 4211

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

Furniture — Assessment of surface resistance to cold liquids

Ameublement — Évaluation de la résistance des surfaces aux liquides froids

First edition — 1979-09-01

UDC 645.4 : 620.193 **Ref. No. ISO 4211-1979 (E)**

Descriptors : furnishing, furniture, tests, determination, resistance to domestic products, liquids.

Price based on 4 pages

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 4211 was developed by Technical Committee ISO/TC 136, *Furniture*, and was circulated to the member bodies in July 1977.

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

Australia	India	Romania
Austria	Iran	South Africa, Rep. of
Bulgaria	Israel	Spain
Czechoslovakia	Italy	Sweden
Denmark	Japan	United Kingdom
France	Mexico	Yugoslavia
Germany, F.R.	Norway	
Hungary	Poland	

The member body of the following country expressed disapproval of the document on technical grounds :

Netherlands

This document is a preview generated by EVS

© **International Organization for Standardization, 1979** •

Printed in Switzerland

Furniture — Assessment of surface resistance to cold liquids

This document is a preview generated by EVS

1 Scope and field of application

This International Standard specifies a method of assessment of surface resistance to cold liquids and relates to the surfaces of finished furniture. It can also be applied to test panels with a size sufficient to meet the requirements of the test and of the same material and finished in the identical manner as the finished furniture.

The type and number of test liquids and the test periods (selected from the table in clause 5) shall be stated in requirement specifications or shall be agreed upon between purchaser and supplier.

A selection of suitable test liquids is given in the annex, but others may be used, if necessary.

2 Principle

Application of a liquid to a surface by means of saturated paper, covered by a glass basin. After a specified period of time, removal of the paper, washing and drying of the surface and examination for damage (discoloration, change in lustre, blistering, etc.). Assessment of the test results in terms of a descriptive numerical rating code.

3. Equipment and products

3.1 Discs, diameter approximately 25 mm, of filter paper with a grammage of 400 to 500 g/m².

3.2 Glass basins with ground edges and without lips, external diameter approximately 40 mm, height approximately 25 mm.

3.3 Tweezers.

3.4 Filter paper.

3.5 Soft, absorbent cloths.

3.6 Diffuse light source, providing evenly diffused light giving an illumination on the test area between 1 000 and 5 000 lx. This may either be diffused daylight or be diffused artificial light.

NOTE — The daylight should be unaffected by surrounding trees, buildings, etc. When artificial light is used, it is recommended that it should have a correlated colour temperature of 5 000 to 6 550 K and an R_a greater than 92.

3.7 Direct light source : 60 W frosted bulb so screened that light reaches the test area only from the bulb and that the bulb is not in direct view of the tester. The angle between the horizontal and a line between the bulb and the area under examination shall be 30 to 60°.

NOTE — One suitable way to perform this test is to use a viewing cabinet as shown in figure 1.

3.8 Test liquid, temperature 23 ± 2 °C.

3.9 Deionized or distilled water, temperature 23 ± 2 °C.

3.10 Cleansing solution containing 15 ml/l of the cleansing agent (3.11) in water (3.9). This solution shall be freshly prepared on each occasion.

3.11 Cleansing agent, of the following composition :

— 12,5 % (*m*/*m*) of a sodium primary (C_{10} — C_{14}) alkyl aryl sulphonate;

— 12,5 % (*m*/*m*) polyethoxylated derivatives of primary or secondary (C_8 — C_{16}) alcohols with 5 to 15 ethoxylated groups having a cloud point of 25 to 75 °C in 1 % (*m*/*m*) aqueous solution (determination of cloud point is described in ISO 1065);

— 5,0 % (*m*/*m*) ethanol;

— 70 % (*m*/*m*) water (3.9).

The cleansing agent shall be stored in a glass bottle in a cool, dark place and should be used within 1 year of the day of preparation.