



SLOVENSKI STANDARD
kSIST-TS FprCEN/TS 16209:2021
01-december-2021

Pohištvo - Razvrstitev glede na lastnosti površine pohištva

Furniture - Classification for properties for furniture surfaces

Möbel - Klassifizierung von Möbeloberflächen

Ameublement - Classification des propriétés des surfaces d'ameublement

Ta slovenski standard je istoveten z: FprCEN/TS 16209

[kSIST-TS FprCEN/TS 16209:2021](https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021)

<https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021>

ICS:

97.140 Pohištvo Furniture

kSIST-TS FprCEN/TS 16209:2021 **en,fr,de**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[kSIST-TS FprCEN/TS 16209:2021](#)

<https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021>

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

FINAL DRAFT
FprCEN/TS 16209

October 2021

ICS 97.140

Will supersede CEN/TS 16209:2011

English Version

**Furniture - Classification for properties for furniture
surfaces**

Ameublement - Classification des propriétés des
surfaces d'ameublement

Möbel - Klassifizierung von Möbeloberflächen

This draft Technical Specification is submitted to CEN members for Vote. It has been drawn up by the Technical Committee CEN/TC 207.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a Technical Specification. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a Technical Specification.

<https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Classification	6
4.1 General	6
4.2 Classification of the resistance to dry heat	6
4.3 Classification of the resistance to wet heat	6
4.4 Classification of the resistance to cold liquids	7
4.5 Classification of the resistance to abrasion	8
4.6 Classification of the resistance to scratching	8
4.7 Classification of the resistance to microscratching	8
5 Expression of results	9
Bibliography	10

ITeH STANDARD PREVIEW
(standards.iteh.ai)

[kSIST-TS FprCEN/TS 16209:2021](https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021)

<https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021>

European foreword

This document (FprCEN/TS 16209:2020) has been prepared by Technical Committee CEN/TC 207 “Furniture”, the secretariat of which is held by UNI.

This document is currently submitted to the Vote on TS.

This document will supersede CEN/TS 16209:2011.

Compared to CEN/TS 16209:2011, the following modifications have been made:

- resistance to microscratching added;
- normative references updated;
- revised Clause 4 classification: normative text added; examples to Table 1 and Table 2 added; Table 3 revised and “Mustard” and “Red wine” added; revolutions Table 4 revised;
- additional Clause 4.7 regarding microscratching added;
- document editorially revised in its entirety.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[kSIST-TS FprCEN/TS 16209:2021
https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021](https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021)

FprCEN/TS 16209:2021 (E)**Introduction**

This document is a working document for the classification of the resistance of furniture surfaces according to the following properties:

Resistance to dry heat

- Resistance to wet heat
- Resistance to cold liquids
- Resistance to abrasion
- Resistance to scratching
- Resistance to microscratching

NOTE Classification for other important properties for furniture surfaces, such as adhesion or light fastness, are included in EN ISO 2409:2007 and EN 15187:2006.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[kSIST-TS FprCEN/TS 16209:2021](https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021)

<https://standards.iteh.ai/catalog/standards/sist/13f5c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021>

1 Scope

This document specifies a system for the classification of the resistance to:

- Dry heat
- Wet heat
- Cold liquids
- Abrasion
- Scratching
- Microscratching

The classification applies to foils, laminates, melamine faced boards, pigmented and transparent lacquers. The classification for the resistance to cold liquids also applies to oils and waxes.

The following classification does not apply to leather surfaces.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CEN/TS 16611, *Furniture - Assessment of the surface resistance to microscratching*

EN 12720,¹ *Furniture — Assessment of surface resistance to cold liquids*
<https://standards.iteh.ai/catalog/standards/sist/135c59a-744a-4528-aca0-8172bcc27787/ksist-ts-fprcen-ts-16209-2021>

EN 12721,² *Furniture — Assessment of surface resistance to wet heat*

EN 12722,³ *Furniture — Assessment of surface resistance to dry heat*

EN 15185, *Furniture - Assessment of the surface resistance to abrasion*

EN 15186, *Furniture - Assessment of the surface resistance to scratching*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12720, EN 12721, EN 12722, EN 15185, EN 15186 and CEN/TS 16611 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

IEC Electropedia: available at <https://www.electropedia.org/>

ISO Online browsing platform: available at <https://www.iso.org/obp>

¹ Impacted by EN 12720:2009+A1:2013.

² Impacted by EN 12721:2009+A1:2013.

³ Impacted by EN 12722:2009+A1:2013.

FprCEN/TS 16209:2021 (E)

4 Classification

4.1 General

This is a classification system for six properties.

Each property relates to five classes, from A to E, by decreasing the requirements asked for each class, as stated in 4.2 to 4.7.

4.2 Classification of the resistance to dry heat

Table 1 — Resistance to dry heat

Temperature °C	Class				
	A	B	C	D	E
55					≥ 4
70				≥ 4	
100			≥ 4		
140		≥ 4			
180	≥ 4				

If the rating is “5”, it is allowed to add “+” to the classification.

EXAMPLE

Test = “class C” (temperature = 100 °C)

Assessment = “4”, result = “class C”

Assessment = “5”, result = “class C+”

Assessment = “5”, result = “class C+”

4.3 Classification of the resistance to wet heat

Table 2 — Resistance to wet heat

Temperature °C	Class				
	A	B	C	D	E
55				≥ 4	= 3
70			≥ 4		
85		≥ 4			
100	≥ 4				

If the rating is “5”, it is allowed to add “+” to the classification (exception: “class E” cannot become “class E+”; assessment > “3” will lead to result “class D” or to result “class D+”, resp.).

EXAMPLE

Test = “class B” (temperature = 85 °C)

Assessment = “4”, result = “class B”

Assessment = “5”, result = “class B+”

4.4 Classification of the resistance to cold liquids

Table 3 — Resistance to cold liquids

Liquid	Class									
	A		B		C		D		E	
	Time	Rating	Time	Rating	Time	Rating	Time	Rating	Time	Rating
Acetic acid	16 h	4	1 h	4	2 min	4	x	x	x	x
Acetone	10 min	4	10 s	2	x	x	x	x	x	x
Ammonia (10 %)	16 h	4	1 h	4	2 min	4	x	x	x	x
Citric acid (10 %)	16 h	4	1 h	4	x	x	x	x	x	x
Cleansing solution	16 h	4	6 h	4	1 h	4	10 min	4	2 min	4
Coffee	16 h	4	6 h	4	10 min	4	10 min	4	2 min	4
Ethanol 48 %	6 h	4	1 h	4	2 min	4	2 min	4	x	x
Mustard ^a	16 h	4	6 h	4	x	x	x	x	x	x
Paraffin oil Dynamic viscosity 20 °C 25 mPas to 80 mPas	24 h	4	24 h	4	6 h	4	1 h	4	10 min	4
Red wine ^b	16 h	4	6 h	4	10 min	4	2 min	4	x	x
Water	24 h	4	24 h	4	1 h	4	10 min	4	10 min	4
^a Mustard shall be “medium”, yellowish and without seeds. ^b Red wine shall be originally from South Europe, South Africa or California with a content of alcohol higher than 13,0 Vol.-%. Merlot, Rioja, Bordeaux and Cabernet Sauvignon are recommended.										
NOTE x means no value										

The highest class achieved by all the liquids shall be the class that is assigned for that surface finish. Only if all liquids belonging to one class are assessed “5”, it is allowed to add “+” to the classification. Exceptions are “ethanol 48 %” in classes B to D (rating “4” is required) and “acetone” in class B (rating “2” is required).

EXAMPLE Example for classification:

Liquid	Example 1		Example 2	
	Class	Rating	Class	Rating
Acetic acid	B	4	B	5
Acetone	B	2	B	2
Ammonia (10 %)	B	5	B	5
Citric acid (10 %)	B	4	B	5
Cleansing solution	A	4	A	5
Coffee	A	4	A	5

FprCEN/TS 16209:2021 (E)

Liquid	Example 1		Example 2	
	Class	Rating	Class	Rating
Ethanol 48 %	B	4	B	4
Mustard	B	5	B	5
Paraffin oil	A	4	A	5
Red wine	C	4	C	5
Water	A	4	A	5
Classification	Class C		Class C+	

“Class C” is the highest class achieved by all liquids, therefore the surface shall be classified as “class C” (example 1) or “class C+” (example 2) resp.

If “red wine” achieved “class B” (identical rating), the surface shall be classified as “class B” (example 1), or “class B+” (example 2) resp.

4.5 Classification of the resistance to abrasion

Table 4 — Resistance to abrasion

IP	Class				
	A	B	C	D	E
Revolutions	≥ 350	]350–150]	]150–50]	]50–30]	< 30

4.6 Classification of the resistance to scratching

Table 5 — Resistance to scratching

Method	Class				
	A	B	C	D	E
Linear Method A	≥ 16,0 N	]16,0–11,0] N	]11,0–5,0] N	]5,0–1] N	x
Circular Method B	≥ 2,5 N	]2,5–1,5] N	]1,5–1,0] N	]1,0–0,5] N	< 0,5 N

4.7 Classification of the resistance to microscratching

Table 6 — Resistance to microscratching

Method	Class				
	A	B	C	D	E
Method A (gloss deviation)	≤ 20 %	> 20 % to ≤ 40 %	> 40 % to ≤ 60 %	> 60 % to ≤ 80 %	> 80 %
Method B (visual assessment)	5	4	3	2	1