

## Updates for Furniture Test Standards (5) – EN 12521:2009

The European pre-standard **ENV 12521:2000** which had been used for years in evaluation of the mechanical and structural safety requirements of domestic tables, was finally revised and approved in July 2009 by the Technical Committee CEN/TC 207 “Furniture” into an official European Standard **EN 12521:2009 “Furniture – Strength, durability and safety – Requirements for domestic tables”**. This **EN 12521:2009** supersedes ENV 12521:2000 and all CEN members are required to adopt this new standard into their national standards and withdraw the conflicting standards at the latest by **January, 2010**.

In UK, the British Standards Institution (BSI) has adopted this EN 12521:2009 and republished it in November 2009 as the British Standard BS EN 12521:2009. **This BS EN 12521:2009 supersedes DD ENV 12521:2000 and the two recently published British Standards BS 4875-5:2009 and BS 7376:2009 (see STR Furniture News # QA0052009 of July 2009) which are withdrawn.**

**EN 12521:2009** specifies the minimum requirements for the safety, strength and durability of all types of domestic tables for use by adults, including those with glass in their construction. However, office tables or desks, non-domestic tables, tables for educational institutions, outdoor tables, and tables with tabletop not fixed to the understructure are not covered by this standard. This standard also does not address requirements for the durability of castors and height adjustment mechanisms, electrical safety, and resistance to ageing and degradation.



Major changes in **EN 12521:2009** compared with the pre-standard ENV 12521:2000 include:

- ❖ **Test conditions (§4):** The **conditioning time** was significant shortened from at least 1 week to **at least 24 hours**.
- ❖ **General requirements (§5.1):** Additional general requirements were introduced on moveable and adjustable parts, load bearing part, and lubricated parts of the tables.
- ❖ **Stability (§5.3):** Expand this section to cover **Stability under vertical load (§5.3.1)** and **Stability for tables with extension elements (§5.3.2)**.
- ❖ **Stability, strength and durability (§6):** The table showing the sequence and the list of stability, strength and durability tests has been updated to include the impact test for tables (with or without glass in their construction) and the stability test for tables with extension elements. Test parameters were also revised for selective tests (see **Table 1** for details).
- ❖ **Information for use (§7):** A new section for the requirements of markings and instructions.
- ❖ **Table top deflection test (Annex A):** A new section which is recommended if the deflection of the main surface of the table measured in the **vertical static load test (EN 1730:2000, §6.3)** exceeds 1/250 of the span for wood base panels, 1/150 of the span for timber products, or 1/100 of the span for other materials.

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**Table 1 – Stability, Strength and Durability Tests for EN 12521:2009 vs. ENV 12521:2000**

Test & Test Description	Loading	EN 12521:2009			ENV 12521:2000		
		Test Sequence	Tables ≤ 600 mm in height OR Tables with tops with a surface area ≤ 0.25m <sup>2</sup>	All other tables	Test Sequence	Low table (i.e. Tables < 600 mm in height)	Normal height table (i.e., Tables ≥ 600 mm in height)
Horizontal static load (EN 1730-2000, §6.2)	Test force 10 times - Direction A, B - Direction C, D	1	200 N 200 N	400 N 400 N	1	300 N 150 N	400 N 200 N
Vertical static load (EN 1730-2000, §6.3)	Test force 10 times a) main surface for tables with a height ≤ 600 mm b) main surface for tables with a height > 600 mm c) ancillary surface	2	1000 N	---	2	1000 N	1000 N
			250 N	1000 N		---	1000 N
			---	200 N		200 N	200 N
Horizontal fatigue (EN 1730-2000, §6.4)	Number of cycles Test force	3	5000 150N	10000 300 N	4	---	10000 300 N
Vertical fatigue for cantilever or pedestal tables (EN 1730-2000, §6.5)	Number of cycles Test force	4	---	10000 300 N	3	10000 300 N	10000 300 N
Vertical impact for tables without glass in their construction (BS EN 1730-2000, §6.6)	Drop height 10 times	5	140 mm	180 mm			
Vertical impact for tables with glass in their construction (EN 1730-2000, §6.6) (EN 14072:2003, §6)	Drop height 10 times - Safety glass - Other glass	6	140 mm 180 mm	180 mm 240 mm			
Stability under vertical load (EN 1730-2000, §6.7)	Test force - Main surface, V1 V2 - Ancillary surface, V1 V2	7	200 N 400 N	200 N 400 N	5	200 N 400 N	200 N 400 N
			---	100 N 200 N	6	100 N 200 N	100 N 200 N
Stability for tables with extension elements (EN 12521:2009, §5.3.2)	Test force	8	---	200 N			

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For enquires or other information on furniture testing, please contact STR at:

Email: [Hardlines.enquiry@strhk.com](mailto:Hardlines.enquiry@strhk.com) / Telephone: 852-24188019 / 29434665

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