



## (BS) EN 335:2013

### **Durability of wood and wood-based products - Use classes: definitions, application to solid wood and wood-based products**

The new EN 335:2013 combines EN 335-3:1995; EN 335-1:2006 and EN 335-2:2006. It gives general definitions of Use Classes for different service situations and is relevant to solid timber and wood-based products. It gives information on the biological agents that can attack wood and wood-based products in defined situations.

- The term 'Hazard Class' for plywood and OSB (in the withdrawn EN 335-3) has been removed and replaced by five 'Use Classes' covering plywood and OSB (and will include LVL once work on the new LVL standard is confirmed).
- Note that Use Classes for LVL covered by the existing EN 14279:2004 are the same as those appearing in the now withdrawn plywood standard EN 335-3:1995.
- See [APA guide](#) to aligning 5 Use Classes and 3 Eurocode 5 Service Classes. This includes the standard's two newly-defined sub-classes for higher moisture content, 3.1 and 3.2.
- See three Eurocode 5 Service Classes. Informative Annex A to EN 335:2013 provides guidance on aligning the three Service Classes given in Eurocode 5/(BS) EN 1995-1-1 and the five Use Classes in this standard.
- Refer also to info on Use Classes for plywood in Annex B of (BS) EN 636:2012+A1:2015.



**Different Use Classes and Occurrence of Biological Agents**

Use Class	Definition	General Service Conditions	Occurrence of Biological Agents <sup>1</sup>				
			Disfiguring fungi	Wood-destroying fungi	Beetles	Termites	Marine Borers
1	Situation in which the wood-based product is inside a construction, not exposed to the weather and wetting.	Interior, dry	-	-	Everywhere in Europe & EU territories	Locally present in Europe & EU territories	-
2	Situation in which the wood-based product is under cover and not exposed to the weather (particularly rain and driven rain) but not persistent, wetting can occur.	Interior, or under cover, not exposed to the weather. Possibility of water condensation.	Everywhere in Europe & EU territories			Locally present in Europe & EU territories	-
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<sup>1</sup> It may not be necessary to protect against all biological agents listed as they may not be present or economically significant in all service conditions in all geographical regions or may not be able to attack some wood-based products due to the specific constitution of the product.

3	Situation in which the wood-based product is above ground and exposed to the weather (particularly rain) <sup>2</sup>	Exterior, above ground, exposed to the weather. When subdivided: 3.1 Limited wetting conditions 3.2 Prolonged wetting conditions	Everywhere in Europe & EU territories	Locally present in Europe & EU territories	
4	Situation in which the wood-based product is in direct contact with ground and/or fresh water <sup>3</sup>	Exterior in ground contact and/or fresh water.	Everywhere in Europe & EU territories	Locally present in Europe & EU territories	-
5	Situation in which the wood-based product is permanently or regularly submerged (i.e. sea water and brackish water).	Permanently or regularly submerged in salt water	Everywhere in Europe & EU territories <sup>4</sup>	Everywhere in Europe & EU territories <sup>4</sup>	Everywhere in Europe & EU territories

<sup>2</sup> Decay risk depends on the climate and other in-use conditions (temperature, relative humidity, structural conditions, design details and maintenance provisions).

<sup>3</sup> Wood-based products which are constantly below water level or completely buried and fully saturated by water are not susceptible to be attacked by fungi but may be damaged by bacterial decay.

<sup>4</sup> The above water portion of certain components can be exposed to all the above biological agents.