Delamination Of Plywood Panels

Voluntary Product Standard PS 1, Construction and Industrial Plywood, defines delamination as follows:

"A visible separation between plies that would normally receive glue at their interface and be firmly contacted in the pressing operation."

Customers often fear that plywood will delaminate if it gets wet. The fact is, water will not affect the glue bond of properly manufactured plywood panels bonded with exterior glue (i.e., EXPOSURE 1 or EXTERIOR). However, some delamination is permitted in EXPOSURE 1 plywood by PS 1, but severely limited in size. EXTERIOR plywood permits no delamination except a limited area when associated with permissible grade characteristics. If for some reason a panel is not properly bonded, exposure to water or moisture will usually make the delamination apparent as a result of separation between two or more individual plies in the area involved. Most, if not all delamination, will become visible upon the first exposure.

Customers sometimes fear that plywood will begin delaminating as it ages. Or, they may worry because a friend or neighbor experienced a problem. Delamination is not a "sickness." If delamination does occur in a small localized area after exposure there is no reason to believe that more areas will appear in the same panel or other panels in the order or shipment.

Some permissible performance, grade, growth or natural characteristics are often interpreted as delamination. Leafing, for instance, a separation on the veneer surface between annual rings that may occur in plywood, is not delamination and is not a product defect, but may be specifically prohibited in certain grades by PS 1. Checking, a lengthwise separation of wood fibers, is often perceived to be the "early stages" of delamination. However, checking is a natural characteristic of wood that does not affect the integrity of the panel. Buckling, a performance condition that may be caused by improper installation of the panel, is not caused by delamination. It is a separate condition unrelated to gluebond performance.

Other APA References:

Form E30	*Engineered Wood Construction Guide*
Form V995	*PS 1-95 Construction and Industrial Plywood*

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