Technical Tip

What Makes AdvanTech Better?

AdvanTech first appeared in the market in 1997 as a solution to the problems builders were having with their OSB and plywood subfloors swelling and delaminating. Although it is manufactured in a process similar to typical OSB, the recipe, engineering and quality control measures are quite unique. Most of the subfloor panels in the market today use a phenol formaldehyde resin during manufacturing. In addition to putting more wood into the panel which results in higher density, AdvanTech utilizes MDI resin technology as the primary binder. MDI resins are generally waterproof and do not contain formaldehyde. The resins used to produce AdvanTech are the reason why it outperforms its phenol formaldehyde based competitors when it comes to moisture resistance. Please see the chart below.

In addition to its water-resistant properties, AdvanTech also has strength and stiffness performance that exceeds typical flooring panels. Most wood structural panels only have to meet the minimum performance requirements of PS2. PS2 is the product standard referenced in the International Building and Residential codes that establishes minimum performance values for OSB and plywood flooring and sheathing. Allowable design values for commodity PS2 panels are published in the 2005 edition of the AF&PA American Wood Council’s, Allowable Stress Design Manual for Engineered Wood Construction, Table M9.2.

Huber Engineered Woods chose to pursue an elevated set of performance requirements that surpasses the PS2 minimums by having it evaluated by the International Code Council Evaluation Service (ICC-ES). ICC-ES is a nonprofit, limited liability company that does technical evaluations of building products, components, methods, and materials. The evaluation process culminates with the issuance of technical reports that, because they directly address the issue of code compliance, are extremely useful to both regulatory agencies and building-product manufacturers. Allowable design values for 23/32 AdvanTech are published in the ICC-ES ESR-1785, Table 2. 23/32 AdvanTech exceeds the strength, stiffness and shear values for 24oc OSB and plywood.

Another key performance characteristic for subfloors is the ability to hold a fastener. The performance value that controls a wood product’s nail or screw holding ability is referred to as Specific Gravity (SG). The higher the SG, the more a panel can grab and hold a fastener. Table 4 in ESR-1785 documents 23/32 AdvanTech as having an equivalent specific gravity of 0.44. The APA, The Engineered Wood Association, publishes equivalent specific gravity for OSB and plywood as 0.40 in Technical Topic TT-039C.