

# COMPARISON OF NOMAFLEX®, REDWOOD AND ASPHALT-IMPREGNATED FIBERBOARD



Referenced Standard Test Methods: ASTM D 545 and AASHTO T 42  
 Referenced Standard Specifications: ASTM D 8139, ASTM D 1751 and AASHTO M 213

Physical Properties	Nomaflex	Asphalt-Impregnated Fiberboard	Redwood	Added Value of Nomaflex
Water absorption	< 1% by volume: Does not swell or absorb any practical amount of water	Absorbs water up to 15% by volume in 24 hours, then swells and separates	Wood is hygroscopic, which means it will either absorb moisture, leading to premature rotting, OR give up moisture leading to shrinkage and undesirable gaps, contingent on the surrounding conditions	Nomaflex is virtually waterproof and will last longer in the presence of moisture and ongoing precipitation
Compression (to 50%)	Minimum > 30 psi, Maximum < 60 psi	Minimum > 100 psi, Maximum < 750 psi	Extremely high compression strength, up to 1750 psi, which does not allow for proper give during the pour or expansion	Nomaflex withstands concrete expansion / contraction with no impact on structural integrity
Recovery (from 50%)	> 80% Compression Recovery	> 70% Compression Recovery	Very minimal compression recovery, which allows for gaps between the filler and the substrates as the concrete contracts	Nomaflex contracts and expands with the concrete and continually aids with keeping the joint free of debris which eliminates subsequent spalling
Extrusion (at 50%)	< 0.1 in. movement	< 0.25 in. movement, (frequently misses this test approval due to variance in product composition)	Very minimal extrusion due to high compression strength	Nomaflex offers more consistency and stability due to its polypropylene composition
Disintegration in boiling hydrochloric acid (HCl)	No disintegration after immersion in boiling hydrochloric acid (HCl) for 1 hr.	No published test results to this standard	No published test results to this standard	Nomaflex shows superior performance (both structurally and with chemical resistance) with this extreme test
Density	> 3.5 lbs./cu.ft.	> 18 lbs./cu.ft.	> 25 lbs./cu.ft.	Nomaflex is light weight and easier to handle, and its polypropylene composition provides rigidity with superior resistance to breakage
Sealant compatibility	Compatible with all known concrete joint sealants	Not always compatible with polyurethane or silicone based sealants as indicated by the sealant manufacturers	Sealant manufacturers typically require a bond breaker between the sealant and wood, especially if treated	Nomaflex allows for a superior bond between the concrete and sealant without 3-sided adhesion or impacting cure times, nor will it discolor the sealant as seen with asphalt-impregnated fiberboard due to asphalt leaching
UV resistance	Excellent UV resistance	Good UV resistance	Fair UV resistance, but will fade, crack and split over time	Nomaflex is made with UV inhibitors for extended life with or without joint sealant
Chemical Resistance	Excellent chemical resistance (polypropylene is a chemically inert compound)	Fair chemical resistance (fibers come apart in the presence of various chemical)	Fair chemical resistance	Nomaflex is chemically inert. AIFB and Redwood are not. Nomaflex will not react with salts, gasoline products, motor oils, acetone and countless chemicals used on and around concrete structures
Composition	Semi-rigid, closed cell polypropylene foam	Compressed fibers of a cellulosic nature bound together and then saturated with asphalt binder	Solid wood consisting of heartwood and some sap wood.	Nomaflex is non-biodegradable, freeze-thaw resistant, and insect resistant. Unlike AIFB and Redwood, it will not disintegrate, decay, rot, split or attract insects over time.