

Poured gypsum roofdecks vary greatly in density, from roof to roof, roof section to roof section, and even within a given roof area. Many variables contribute to these fluctuations in density including original pour specifications, moisture content, and roof leaks.

ES Products offers a variety of fasteners that can be used to attach a base ply to this highly variable substrate. Given the variability of gypsum decks, it is imperative to perform field pull-tests of fasteners when considering any roof membrane installation. Even with such testing, during the roofing process, unexpected density variations are frequently encountered.

Proper fastener selection is vital to the overall performance of any roofing assembly. Fasteners should be installed without unnecessary deformation to the fastener or roofdeck. Fasteners should not bend or "accordion" and there should be no spalling to the underside of the roofdeck.

This guide offers suggestions as to fastener selection. The expected withdrawal value range for each fastener is listed. Field pull-tests will determine actual performance and dictate appropriate fastener selection. Decks that are too soft to give adequate minimum fastener withdrawals may need to be replaced or repaired. Decks that are hard and preclude successful impact application of fasteners may require predrilling and/or alternate fastener selection. In some instances, more than one fastener may be determined to perform satisfactorily.

Once typical withdrawal values have been established and the appropriate fastener(s) selected, fastening patterns can be developed. Consult the specific ES' product specification sheet or [www.esproducts.com](http://www.esproducts.com) for fastening recommendations widely accepted by membrane and roofdeck manufacturers.

ES Products specializes in fastening to lower density roofing substrates like poured gypsum. Call us at 800-493-7663.



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