

Pull-Off Strength Comparison - ASTM D4541

Industrial Nanotech uses standard test methods such as ASTM D4541 to validate the durability, longevity and adhesiveness of its coatings. The pull-apart strength, also known as tensile strength, of a coating is an important performance property that has been used in specifications. The ASTM D4541 test method serves as a means for uniformly preparing and testing coated surfaces, and evaluating and reporting the results. The test determines either the greatest perpendicular force (in tension) that a surface area can bear before a plug of material is detached, or whether the surface remains intact at a prescribed force.



Nansulate® Translucent Coatings were rated at an average Pull-Off Strength of 2400-2450 psi.

Good Painting Practice, SSPC Painting Manual Volume 1 states that a 200 psi or better is considered good adhesion. Our results are 2400-2450 psi.

Example Coating Comparisons:

To provide you with a reference for Nansulate® Coating results, we have chosen a class of marine environment either colored epoxies and/or corrosion control coatings, which typically must meet high standards for durability, and pull-off strength. None of these coatings provide thermal insulation. The comparison is meant to show the excellent performance of Nansulate®'s adhesion abilities.

Product	Description	ASTM D4541 Result
Nansulate® Translucent Coatings	Insulation and corrosion control coatings	2400-2450 psi strength
Euronavy Epoxy	Long-term epoxy with NAVSEA/US Navy high durability approval.	1706-2417 psi strength
Amercoat 385	Protective marine coating, epoxy	>1000 psi strength
Bond-Plex	Protective, adhesion promoting, acrylic	300 psi strength