



A field uplift testing update

A new edition of ASTM E907 has been published

by Mark S. Graham

In January, ASTM International reinstated its field uplift test method, ASTM E907-25, “Standard Test Method for Field Testing Uplift Resistance of Adhered Membrane Roofing Systems,” with revisions. The updated edition bears a “-25” designation reflecting its December 2025 approval date. If you manufacture, design or install adhered low-slope membrane roof systems that may be subject to field uplift testing, you should be aware of ASTM E907-25.

Background

ASTM E907 originally was published in 1983 as a consensus method for determining the in-place uplift resistances of built-up roof systems. The test method commonly was used for assessing the extent of damage to BUR systems after wind damage from thunderstorms.

In 1996, the test method was revised and expanded to apply to adhered membrane roof system types other than BUR, including polymer-modified bitumen and single-ply

membranes. By this time, though not specifically indicated in ASTM E907's scope, the test method also was being used to assess the application of newly installed adhered membrane roof systems.

Both the 1983 and 1996 standards provided for the measurement membrane deflection during testing. The standards also indicated sudden increases in membrane deflection indicate suspected problems warranting further investigation.

NRCA has long contended field measurement of membrane deflection is inherently variable. Also, membrane deflection is not measured by laboratory test methods used for wind uplift resistance ratings to provide a basis for comparing field measurements. In 2015, NRCA issued an Industry Issue Update regarding the topic sharing its concerns. NRCA recommended manufacturers and contractors avoid projects where the test is specified and offered specific cautionary language for when field uplift testing is encountered.

In 2013, ASTM International withdrew ASTM E907-96 because attempts to reapprove or revise the standard lacked the organization's necessary consensus.

However, the ASTM E907 Task Force within ASTM Committee D08 on Roofing and Waterproofing continued its work. In late 2022, eight task force members' companies participated in an interlaboratory study where 24 field uplift tests were conducted on identical roof system specimens. The test results varied but showed there is no correlation between field uplift tests' deflection measurements and FM Approvals' laboratory-derived, uplift-resistance approvals.

ASTM E907-25

The newly published ASTM E907-25 contains several significant changes from its previous editions.

ASTM E907-25's scope is limited to assessing adhesion of adhered roof membranes to the surfaces on which they are directly adhered. The modes of failure detected include adhesive failure of bonding adhesive to the underside of the roof membrane, cohesive failure of bonding adhesive, adhesive failure of bonding adhesive to the substrate and cohesive failure of the substrate.



Roofing professionals immediately should use ASTM E907-25 in place of its previous editions



Insulation breakage or separation from the roof deck or fastener backout or breakage are now outside the test method's scope. If these conditions are encountered during a test, the test result can be considered inconclusive, and an additional test may be conducted.

Also, unless otherwise specifically identified in the construction documents, the maximum test pressures should be the roof area's code-prescribed design wind loads based on the allowable stress design method. The code requires the design wind loads be noted in construction documents; these loads should be

used for testing purposes. Interested parties should reach an agreement on test pressures before proceeding with the test.

ASTM E907-25 considers a roof membrane to have failed the test if it exhibits a tear, puncture, fracture or any other form of through-roof membrane opening inside the test chamber.

The presence of visible blistering, ballooning, bowing or upward deflection or separation of the roof membrane layers within the test chamber are not considered failures. A visible blister, ballooning or separation of membrane layers can be considered a suspected failure if it exhibits an increase in diameter by more than 50% between test pressure increments.

In the event of a roof membrane failure or suspected failure, further investigation, such as taking a roof test cut, should be performed.

Measuring roof membrane deflection and having maximum allowable membrane deflection is no longer a part of ASTM E907-25.

Recommendations

Although a revised and updated version of ASTM E907-25 has been published, further work on the test method standard continues. During ASTM Committee D08's balloting process, several committee members suggested further revisions to the standard. These will be balloted and considered during the ASTM E907 task force's future meetings.

The roofing industry should begin using ASTM E907-25. The previous editions of ASTM E907 have been used

You can find ASTM E907-25 at astm.org.



for years, and some roofing professionals may not be aware of the new edition. I recommend roofing professionals immediately use ASTM E907-25 in place of its previous editions.

I also recommend ASTM E907-25 be used in place of FM 1-52, “Field Verification of Roof Wind Uplift Resistance.” FM 1-52 is not a consensus test method and, as the ASTM interlaboratory study has shown, the

deflection-based criteria used in FM 1-52 does not correlate to FM Approvals’ laboratory-derived, uplift-resistance approvals. FM should either withdraw FM 1-52 or update it incorporating ASTM E907-25 criteria. 🌱🌿

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Massachusetts leads in LEED projects



Massachusetts has again topped the U.S. Green Building Council’s annual ranking of states for LEED green building in

2025; the state was also listed as No. 1 in 2024, according to USGBC.

States are ranked based on the number of LEED-certified square feet per capita in the state. Massachusetts certified 121 LEED projects, surpassing 29 million square feet, which translates to 4.24 LEED-certified square feet per person.

The top 10 states certified 1,262

projects and more than 335 million gross square feet under LEED. The states following Massachusetts in the top 10 are: California, Colorado, Georgia, Illinois, Maryland, Nevada, New York, Virginia and Washington.

Had it been a state, Washington, D.C., would have had the highest ranking with 49.20 green square feet per capita and 115 green building projects.

Roofing Alliance conducts safety survey

The Roofing Alliance, in conjunction with Texas A&M University, College Station, is asking roofing professionals to participate in the Roofing Industry Safety Practices and Psychological Drivers survey, which aims to study why some roofing employees do not follow safety practices.

The survey results will be used to inform researchers of psychological factors that may influence why some roofing employees do not follow safety procedures or do so unwillingly or inconsistently despite having access to equipment, training and incentives.

“We are committed to investing in research projects that help advance the roofing industry—especially when it comes to safety,” says Alison L. LaValley, CAE,

executive director of the Roofing Alliance. “The findings of this study will result in the development of evidence-based interventions to foster a personal commitment to safety.”

The survey is designed to be completed by safety managers, superintendents, foremen and other professionals with direct experience overseeing safety practices on residential or commercial roofing projects. There are 12 questions that will take 10-15 minutes to complete. All responses are anonymous, and no individual names or companies will be published in the results.

All participants will receive a summary of research findings after the study is complete. To take the survey, visit tamu.qualtrics.com.

