Corporate Office
310 Quadral Drive
Wadsworth Ohio 44281

Tel: 800.356.3521
Fax: 330.336.5073

TECHNICAL BULLETIN

July 1, 2010

Field Uplift Testing of SOPREMA Warranted Membrane Assemblies

ASTM E 907

FM Global Loss Prevention Data Sheet 1-52

BACKGROUND

Soprema roof assemblies are tested at third party accredited laboratories to determine wind uplift performance. One of the primary testing laboratories is Factory Mutual or FM Global. These ratings and assemblies are published in the FM Global proprietary database named 'RoofNav'. Non-FM Global assemblies have been tested and rated by third party accredited laboratories and incorporated into local and regional building codes such as the Dade County Notices of Acceptance. These roof assemblies have not been tested and rated by Soprema. Soprema has proposed the assemblies for testing and has requested a published wind uplift rating for the assemblies. Only some of the installed components have been manufactured by Soprema. Performance of non-Soprema products is outside the control or responsibility of Soprema unless incorporated into a 'Full Systems Warranty'.

Over 30 years ago, the 5' x 5' field vacuum test was developed to quantify performance of in situ roof assemblies. The test protocol has, over a period of years, gone through a series of changes including the applied margin of safety and acceptable levels of deflection. Moreover, the ASTM and FM Global protocols are not the same. FM Global has recently gathered a task force to review the 1-52 Loss Prevention Data Sheet including alternate quality control methods.

In certain regions of the country, field wind uplift testing of recently installed roof assemblies has become increasingly common as a quality control measure. In many cases, the testing is carried out without notice to either the roofer or to Soprema. In some cases, the roofs have been tested before full cure of materials and, in others, outside the protocol requirements of either ASTM E 907 or the FM Global 1-52.

In many cases, the testing is used as a method of acceptance of the roof assembly by the building owner even though the criteria was not included in the project specifications.

The reliability of these test methods and their acceptance as a recognized industry standard have been called into question. Soprema does not believe the test should be used as a quality assurance protocol without clear and agreed testing criteria at the commencement of the project.

1) SOPREMA and the NRCA are unaware of any credible research that correlates FM Global's test method for uplift performance for approval classifications to FM Global1-52 results or actual field conditions;

2) SOPREMA and the NRCA believe the use of ASTM E907 or FM Global 1-52 (and the reliability of the results derived from this testing) is inappropriate for quality assurance purposes; and

3) Field uplift testing can be – and often is – damaging to the existing roof system, unless properly conducted by highly skilled professionals. In addition, the test must include opening of the assembly at any failed area to fully determine the mode of failure.

Testing Limitations

1) Field uplift testing following either protocol must be carried out by a laboratory accredited by an industry recognized testing agency and by technicians who have been certified by the laboratory trained in the protocol;

2) Notice of the testing must be provided to Soprema not less than seven (7) days prior to testing. The notice must provide the proposed test protocol, the number of tests to be carried out, and the roofing contractor who will patch the openings after testing. Field, perimeter and corner pressures shall be calculated by a professional engineer registered within the jurisdiction. Calculations shall be stamped by the engineer of record. If pressures are provided by an FM Global engineer, the pressures shall be provided on FM Global letterhead. Notice shall be given in writing to kathmer@soprema.us.

3) In addition to notice to Soprema, the roofer of record shall be notified of the tests within the same seven day period.

Any field uplift testing NOT conducted in accordance with these requirements will void any issued Soprema warranty or may stop issuance of a Soprema warranty. Please contact the Soprema National Technical Department before conducting any field uplift testing and provide the data required above prior to commencement of any testing.

SOPREMA INC.

Kevin J. Athmer

Corporate Technical Manager