THE IMPORTANCE OF USING A SUSTAINABLE ROOFING MEMBRANE

Today's building owners face a multitude of options when it comes to selecting commercial, low-slope roofing systems. But how does one select the right system? Every manufacturer in the industry claims to have the best material, the best solutions, and the best contractors to install or replace a roof on an owner's facility. In the past, it was "good enough" to review a contractor's relevant project history with specific manufacturers. The process was simple: get three proposals and select a roof. Done.

But it hasn't been this easy for building owners for quite some time. Issues such as sustainability, environmental responsibility, and "green" issues are now signifiant drivers in the decision-making process. Inclusion of these considerations has been a major paradigm shift for the industry.

Sustainability in roofing is complex. Generally speaking, industry outsiders would not consider low-slope roofing – with its historic reliance on asphalt tankers, coal tar pitch, solvent-based adhesives, torches, fumes, disruption and excessive debris – to be sustainable, environmentally responsible, or "green." Various sources consistently rank roofing, and particularly re-roofing, as one of the highest waste producing activities in construction. So how does a building owner determine sustainability?

LEED and a handful of other sustainability initiatives may be considered. While these efforts are certainly admirable, durability and performance are not really considered in these determinations of environmental responsibility. This omission is problematic because a roof has to demonstrate durability and performance and, above all else, not leak. Ultimately, any roofing system that is replaced as a result of failure before the end of its warranty period cannot be considered sustainable.

Finally, for facility managers, corporate sustainability initiatives must also be considered. These managers must select a system that will perform AND provide verifiable metrics to meet various corporate sustainability efforts.

So how should a facility manager decide? Enter NSF/ANSI 347, Sustainability Assessment For Single Ply Membranes. NSF/ANSI 347 is an American National Standard developed to evaluate single-ply roofing manufacturers and their membranes. The reverse side of this flyer features the top five reasons a facility manager should use this standard when selecting a roofing system.

1. MANUFACTURER TRAINING AND CERTIFICATION PROGRAMS

The standard recognizes the importance of manufacturer training and certification programs for its contractors. Believe it or not, there are still roofing manufacturers that do not have established training or certification programs.

Their authorization programs typically rely on volume of installed or purchased material and scores from warranty inspections. As long as a contractor buys enough material and persuades inspectors to issue passing scores, they maintain their eligibility to install materials. This becomes more problematic when the inspector is also the manufacturer's sales rep or otherwise benefits from issuing passing scores.

Verifiable training and certification programs, while often more onerous for contractors, generate documentation and assurance that technicians have been trained and certified by the manufacturer. Perhaps more important, participation in these programs proves both the manufacturers and contractors are committed to ongoing training in order to remain current on manufacturer requirements.

2. ROOFING-INDUSTRY GUIDED

This standard is consensus-based and developed with participation from stakeholders across the roofing industry: building owners, designers, government agencies, manufacturers and others.

Unlike other standards and sustainability programs that dictate priorities without the benefit of having survived previous failures and resulting litigation, NSF/ANSI 347 benefits from roofing industry participation while maintaining beneficial sustainability initiatives in material design, manufacturing, and material reclamation.

3. RECYCLING INCENTIVES

NSI/ANSI 347 awards points to manufacturers that support recycling of post-consumer and pre-consumer roofing materials. In addition to recycling during the manufacturing process, NSF/ANSI 347 also incentivizes manufactures to recycle materials that have been torn-off existing buildings.

As previously mentioned, re-roofing generates tremendous quantities of waste. Removing these materials from the waste stream significantly reduces burden on landfills and waste processing efforts.

4. REPORTING REQUIREMENTS

Manufacturers with NSF/ANSI 347 approved membranes provide relevant metrics and documentation to support an owner's corporate sustainability initiatives.

The standard recognizes and awards points to manufacturers that complete an Environmental Product Declaration conducted in accordance with ISO 14025 and validated by an independent third party. Manufacturers receive additional points if they participate in a cradle-to-gate or cradle-to-grave ISO 14044 conformant life cycle assessment. Both of these stringent reporting requirements provide third-party verified documentation which can be used to reinforce any position on sustainability.

5. EMPHASIS ON PERFORMANCE AND DURABILITY

Of the 123 possible points in the standard, 82 points are related to performance and durability. In addition to offering points simply for complying with a membrane's respective ASTM specification, the standard offers points to manufacturers who are able to document performance of membranes in the field over time in multiple climate zones.

The longer the membrane has demonstrated successful performance, the more points it receives. At the low end of the scale, 1 point is awarded at 10 years of service life. At the high end of the scale, 10 points are awarded for 30 years of service life. Additional points are also awarded for manufacturers who have established roofing maintenance programs in order to prolong performance of in-place roofing systems.

Perhaps most impressive, NSF/ANSI 347 awards manufacturers points based on results of physical properties measurements from samples taken from in service membranes. These samples are measured in the laboratory for key indicators of membrane longevity including thickness over scrim, total thickness, elongation, and tensile strength. Results must be reported to the certification body. The manufacturer earns more points the longer the membrane has been in service.

SUMMING IT ALL UP

Given the increasingly overwhelming technical and sustainability initiatives, standards, and recommendations flooding the construction industry, it is rare to find a standard that supports informed decision making by utilizing consensus-based criteria supported by third-party testing and verification whenever possible. NSF/ANSI 347 is such a standard and is an excellent tool to assist decision makers in selection of roofing membranes and systems.

ONLY ONE ROOFING MEMBRANE HAS EVER RECEIVED A PLATINUM RATING

The Sarnafil roofing membrane earned the highest possible certification to NSF/ANSI 347 and is still the only roofing membrane to achieve a Platinum rating.

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