Exit signs — Evolving Products, Evolving Standard

By Mike Shulman

The original “EXIT” sign was probably black paint on a white wall. Such painted signs and placards are still in use today, but their effectiveness is dependent on external light sources. To comply with model code requirements stating that exit signs be continuously illuminated while the building is occupied, most facilities choose internally illuminated exit signs. Per Section 7.10.7 of NFPA 101-2006, Life Safety Code, and Clause 1011.4 of the International Building Code (IBC), such internally illuminated signs must be listed.

LED, electroluminescent and photoluminescent products are also widely available as floor proximity path markers, as may be required by NFPA 101, clause 7.10.1.7. They are Listed under the product category “Floor Proximity Egress Path Marking Systems (IMZI)” for compliance with UL 1994, Standard for Safety for Low Level Path Marking and Lighting Systems.

UL 924 still offers two paths to determine compliance with minimum visibility requirements. The luminance and contrast measurement method determines a sign visibility’s equivalence to the historic benchmark — the black-on-white placard that is externally illuminated at 5 footcandles. The observation test uses human observers and statistical analysis to directly determine whether the image on the sign is discernible at its intended viewing distance, at the end of its rated time (typically 90 minutes), when
The International Building Code (IBC); NFPA 5000, Building Construction and Safety Code; and the International Residential Code (IRC) all provide specific installation requirements for wind and uplift resistance. Additionally, some insurance companies require certification for impact resistance to minimize hail damage risks. Compliance with these requirements can be demonstrated by the use of UL Listed and/or Classified roofing products.

UL Listed asphalt shingles that have been evaluated for wind resistance using UL 997 or ASTM D3161 are found under the product category “Prepared Roof Covering Materials (TFWZ).” These materials are primarily investigated for impact resistance under the test procedure “Prepared Roof Covering Materials, Asphalt Shingle Wind Resistance (TGAH).” These products are evaluated for impact resistance using a calculation method described in ANSI/UL 2390 and ASTM D6381. The impact resistance classes under TGAH based on wind speed are Class A (60 mph), Class D (90 mph) and Class F (110 mph).

UL also Classifies asphalt shingles for wind-resistance under the product category “Prepared Roof Covering Materials, Asphalt Shingle Wind Resistance (TGAH).” These products are evaluated for wind uplift forces using a calculation method described in ANSI/UL 2390 and ASTM D6381. The uplift resistance classes under TGAH based on wind speed are Class D (90 mph), Class G (120 mph) and Class H (150 mph). This test method is also described in the newly released ASTM D7158, Standard Test Method for Wind Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method).

UL Classifies roof coverings and components of roof systems for impact-resistance under the product category “Roof Covering Materials, Impact Resistance (TGAM).” The basic Standard used to investigate these products is UL 2218. Guide Information for all product categories can be found in UL’s Online Certifications Directory at www.ul.com/database.

Though Mother Nature can produce many surprises, proper installation methods coupled with the right model building codes and product standards provide our best protection against unwanted damage to roofing systems and roof covering materials. For more information on UL Listed or Classified roofing products, contact Dwayne Sloan in Research Triangle Park, N.C., by phone at +1-919-549-1676; or by e-mail at Dwayne.E.Sloan@us.ul.com.

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