Guide Specification

Silicone HS SPF

Section 07 56 00 Fluid-Applied Roofing

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a seamless, fully adhered fluid-applied roof coating system over new sprayed-in-place polyurethane foam as outlined in this specification.

B. The manufacturer's application instructions for each product used are considered part of this specification and should be followed at all times.

C. Related Sections:
1. Section 07 60 00: Flashing and Sheet Metal
2. Section 08 60 00: Roof Windows and Skylights
3. Section 07 57 13: Sprayed Polyurethane Foam Roofing

1.2 SYSTEM DESCRIPTION

A. Silicone HS SPF shall be a complete system of compatible materials to create a seamless waterproof fluid-applied roof coating system.

B. Silicone HS SPF shall be designated for application on the specific type of substrate as indicated on the drawings and specifications.

1.3 SUBMITTALS

A. Technical Data: Submit Neogard product technical literature and installation instructions.

B. Samples: Submit samples of specified fluid-applied roof coating system. Samples shall be construed as examples of finished color and texture of the system only.

C. Applicator Approval: Submit letter from Neogard stating applicator is approved to install the specified fluid-applied roof coating system.

D. Warranty: Submit a copy of the Neogard warranty to meet project specifications.

1.4 QUALITY ASSURANCE

A. Supplier Qualifications: Silicone HS SPF, as supplied by Neogard, is approved for use on this project.

B. Applicator Qualifications: The Applicator shall be approved by Neogard to install the Silicone HS SPF fluid-applied roof coating system. Manufacturer’s written verification of applicator approval is required.

C. Regulatory Requirements:
1. The fluid-applied roof coating system shall be rated Class A in accordance with the spread of flame test requirements of UL 790.
2. Materials used in the fluid-applied roof coating system shall meet federal, state and local VOC regulations.

1.5 DELIVERY, STORAGE AND HANDLING

A. Containers and Packaging: Materials shall be delivered in original, tightly sealed containers, clearly labeled with the manufacturer’s name, brand name, type of material and batch number(s).

B. Storage and Handling: Store materials at 75°F/23°C with careful handling to prevent damage to products. All materials shall be stored in compliance with local fire and safety requirements. Avoid high temperatures and direct sunlight.

1.6 PROJECT CONDITIONS

A. Prior to starting work, read and follow the Safety Data Sheet (SDS) and container labels for detailed health and safety information.

B. Proceed with application of materials only when substrate temperature is above 40°F/4°C and in dry conditions. Do not apply if precipitation is imminent, or to a damp or frosty surface. Temperature should more than 5°F/3°C above dew point and rising. If ambient and/or substrate temperatures are approaching or above 110°F/43°C, limit material application to evening hours.

C. Coordinate fluid-applied roof coating work with other trades to ensure coatings are protected from traffic and other abuse until completely cured and installation is complete.

D. Maintain work area in a neat and orderly condition, removing empty containers, rags, and trash from the site daily.

1.7 WARRANTY

A. Upon request, Neogard shall offer a manufacturer's standard warranty for institutional, commercial, industrial, and high-rise/multi-family residential projects only, after substantial completion of the application and receipt of a properly executed warranty request form.

PART 2 MATERIALS

2.1 MANUFACTURER

A. Neogard, a part of Hempel, 2728 Empire Central, Dallas, TX 75235, 214-353-1600, www.neogard.com.

2.2 MATERIALS

A. Fluid-Applied Roofing (Hempel product numbers in parentheses):
1. Liquid Flashing: 7870 (873JB) series single-component, moisture cured, high solid silicone.
2. Reinforcing Fabric: 86220 (63BJB) reinforcing fabric (Tietex T272).
3. Flashing Tape: 86218 (62ZJB) flashing tape.
4. Sealant: 70998 (63XJB) silicone sealant.
5. Protective Coating: 7870 (873JB) series single-component, moisture cured, high solid silicone.

B. Typical physical properties of cured 7870 cured silicone used on this project are:
1. Tensile Strength, 247 psi, ASTM D412
2. Elongation, 237%, ASTM D2370
3. Reflectivity, 89 (7870 only), ASTM C1549
4. Emissivity, 90 (7870 only), ASTM C1371
5. SRI, 113 (7870 only)
6. Shore A, 37, ASTM D2240
7. Flammability, Class A, ASTM E108
8. Weathering (QUV), No degradation at 5,000 hours, ASTM G154
9. Permeance at 20 mils (100°F/38°C, 90% relative humidity), 10.7 perms, ASTM E96

C. Sprayed Polyurethane Foam used on this project shall meet the following minimum physical properties:
1. Tensile Strength ASTM D1623, 60-80 psi
2. Density ASTM D1622, 2.9-3.2 pcf
3. Compressive Strength (parallel to rise), ASTM D1621, 55 +/- 5% psi at yield
4. Closed Cell Content, ASTM D1940, >90% min.
5. Humid Aging (and % linear change) at 158°F/70°C, 97% relative humidity, 28 days, ASTM D2126, -0.26%
6. K Factor (aged), ASTM C518, 0.158 BTU/hr ft2 °F/in.
7. Flame Spread (nominal 2" thickness), ASTM E84, 55 maximum

D. The above tested results are typical values. Individual lots may vary up to 10% from the typical value. Further technical information can be found at www.neogard.com.

2.3 ACCESSORIES

A. Fabric reinforcement and waterproofing coverings for expansion joints shall be compatible with specified fluid-applied roof coating system.

B. Miscellaneous materials such as adhesives, metal primers, metal vents and drains shall be a composite part of the roof system and shall be compatible with the specified fluid-applied roof coating system.

C. Granules (Optional): Granules shall be #11 screen size, dust free, ceramic-coated roofing granule.

PART 3 EXECUTION

3.1 EXAMINATION

A. Inspect surfaces, which will receive the Silicone HS SPF fluid-applied roof coating system to make sure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other contaminants.

B. Verify that polyurethane foam surface texture ranges from smooth orange peel to verge of popcorn and is acceptable to receive the fluid-applied roof coating system. “Popcorn” or "Tree Bark" surfaces are unacceptable and must be reworked or replaced prior to coating.

C. Verify that all roof penetrations, mechanical equipment, cants, edge metal, and other on-roof items are in place and secure.

D. Verify that all critical areas around the immediate vicinity of the coating application area are suitably protected.

E. Verify that roof has sufficient slope for water to drain.

F. Verify all roof drains are clean and in working order.

G. Verify that all air conditioning and air intake vents are suitably protected or closed.

3.2 PREPARATION

A. All existing HVAC and other equipment shall be protected from any damage that could be caused by the fluid-applied roof coating application.

B. Raising, re-setting, and protection of air conditioning equipment, ventilators, and exhaust fans may be required.

C. Protect all adjoining areas that are not to receive the fluid-applied roof coating system and provide a suitable work station to mix the coating materials.

D. All sprayed polyurethane foam surfaces shall be free of moisture, frost, dust, debris, oils, tars, grease or other materials that will impair adhesion of the fluid-applied roof coating system.

E. Consult spray polyurethane foam manufacturer for proper cure time of applied polyurethane foam prior to application of fluid-applied roof coating.

3.3 APPLICATION

A. Factors That Affect Dry Film Thickness: Volume of solids, thinning, surface profile, application technique and equipment, overspray, squeegee, brush and roller wet out, container residue, spills and other waste are among the many factors that affect the amount of wet coating required to yield proper dry film thickness. To ensure that specified dry film thickness is achieved, use a wet mil gauge to verify actual thickness of wet coating applied, adjusting as needed for those factors which directly affect the dry film build.

B. 10-Year Warranty System (25 dry mils total): Thoroughly mix and apply 7870 at a rate of 55 sf/gal (1.8 gal/100 sf or 28 wet mils) to yield 25 dry mils. Allow to cure.

C. 15-Year Warranty System (30 dry mils total, two application options):
   1. Single Coat: Thoroughly mix and apply 7870 at a rate of 45 sf/gal (2.2 gal/100 sf or 34 wet mils) to yield 30 dry mils. Allow to cure.
   2. Two Coats:
      a. First Coat: Thoroughly mix and apply 7870 at a rate of 90 sf/gal (1.1 gal/100 sf or 17 wet mils) to yield 15 dry mils. Allow to cure.
      b. Second Coat: Thoroughly mix and apply 7870 at a rate of 90 sf/gal (1.1 gal/100 sf or 17 wet mils) to yield 15 dry mils. Allow to cure.

D. 20-Year Warranty System (35 dry mils total):
   1. First Coat: Thoroughly mix and apply 7870 at a rate of 80 sf/gal (1.25 gal/100 sf or 20 wet mils) to yield 17.5 dry mils. Allow to cure.
   2. Second Coat: Thoroughly mix and apply 7870 at a rate of 80 sf/gal (1.25 gal/100 sf or 20 wet mils) to yield 17.5 dry mils. Allow to cure.

3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Services: Inspection by an independent third party or coating manufacturer's representative may be required to verify the proper installation of the fluid-applied roof coating system. Any areas that do not meet the minimum standards for application as specified herein shall be corrected at the applicator's expense. Manufacturer's inspection or verification shall not constitute acceptance of responsibility for any improper surface preparation or application of material.

B. Applicator is responsible for ensuring sufficient coating is applied to the roof.

3.5 CLEANING

A. Surfaces not intended to receive the Silicone HS SPF fluid-applied coating system shall be protected during the application of the system. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by cleaning, repairing or replacing. All debris from completion of work shall be completely removed from the project site.

3.6 PROTECTION

A. After completion of application, do not allow traffic on coated surfaces for a period of at least 48 hours at 75°F/23°C and 50% relative humidity, or until completely cured.

END OF SECTION

Issued by: Hempel (USA) – Neogard Silicone HS SPF

This Guide Specification ("**Guide Spec**") relates to the supplied products/system ("**System**") and is subject to update from time-to-time. Accordingly, the buyer/applicator should refer to the Guide Spec current as of the time of delivery. In addition to the Guide Spec, the buyer/applicator may receive some or all of the specifications, statements and/or guidelines listed below or available at www.neogard.com (the "**Additional Documents**"):

No.	Document Description
1	PDS
2	Guide Specification
3	Application Manual
4	Other Technical Support Information (i.e. summary application tables, troubleshooting guides, maintenance manuals, chemical resistance charts and other technical information)

In the event of a conflict between this Guide Spec and the Additional Documents, the conflict shall be resolved in accordance with the order of priority set forth above. In addition, the buyer/applicator should refer to the relevant Safety Data Sheets current as of the time of delivery of the System and available at www.neogard.com. Buyer/applicator is responsible for determining the suitability of the intended use of the System, and Neogard disclaims all responsibility for any use, handling and storage of any components of the System that are not in accordance with the requirements set forth in the relevant PDS(s), this Guide Spec and the Additional Documents. The terms and provisions hereof apply to this Guide Spec, the Additional Documents and any other documents supplied by Neogard in respect of the System. The System is supplied and all technical assistance is given subject to the General Conditions of Sale of Hempel Products and/or Services available at www.hempel.com. NEOGARD MAKES NO OTHER WARRANTY THAT EXTENDS BEYOND THE WARRANTY REFERENCED THEREIN INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEOGARD WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OR CONDITION, OR THAT IN ANY WAY ARISE IN RELATION TO THE SYSTEM.
SiliconeHSSPF-GSCSI ksk 07072021.docx

Neogard®, a part of Hempel
2728 Empire Central - Dallas, Texas 75235 - Phone (214) 353-1600 - Fax (214) 357-7532 - www.neogard.com