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1. Method 1: Activate “Show/Hide ¶” to reveal formatting symbols. The default shortcut for this setting is ctrl+\* (ctrl+shift+8).
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Specifier Note: This guide specification has been prepared using the CSI® (Construction Specification Institute) *MASTERFORMAT*® 2018 Edition.

The purpose of this guide specification is to assist the specifier in correctly specifying sealant products and execution. The specifier needs to edit the guide specifications to fit the needs of specific projects. Editable text fields are highlighted in orange for visibility. Contact a Henkel OSI® Specialist to assist in appropriate product selections.

This guide provides for a high performing OSI® QUAD® Flash, Liquid Applied Flashing Membrane. OSI® QUAD® Flash is a gun grade waterproofing sealant compound designed for use in rough openings of structural walls. QUAD® Flash allows for same day installation of windows, doors and other wall assembly components and offers a strong bond to primary window, door, and wall sheathing materials. QUAD® Flash will stick to damp or dry surfaces and offers superior UV resistance. It can be applied in cold weather as low as 35°F and reaches full cure in 4-6 hours depending on temperature and humidity. Training for proper application of QUAD® Flash can be found at OSITough.com/training; click on CMU window tutorial.

QUAD® Flash is intended for use in both vertical and horizontal above grade applications and is compatible with plywood, OSB, XPS, Aluminum, Coated Aluminum, Galvanized Steel, EPS, DensGlass, Concrete & Masonry, Vinyl, Wood, FRP, EPDM and most other building materials. For any material compatibility questions or concerns, contact a Henkel OSI® Specialist for assistance.

DISCLAIMER: This Henkel Corporation Guide Specifications has been written as an aid to the professionally qualified specifier and design professional. The use of this guideline specification requires the sole professional judgment and expertise of the qualified specifier and design professional to adapt the information to the specific needs for the building owner and the project, to coordinate with their construction document process, and to meet all the applicable building codes, regulations, and laws. HENKEL EXPRESSLY DISCLAIMS ANY WARRANTY, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OF THIS PRODUCT FOR THE PROJECT.

## **OSI® QUAD® Flash: Liquid Applied Flashing Membrane**

# **SECTION 07 14 16 – Cold Fluid Applied Waterproofing**

## **PART 1 GENERAL**

**1.01 SUMMARY** (Specifier Note: edit the following [A. This section includes the following] to meet project specific project applications and conditions.)

- A. This section includes the following:
1. OSI® QUAD® Flash: Application of Cold Fluid Applied Waterproofing for use in window and door flashing applications.
- B. RELATED SECTIONS: (Specifier Note: edit the following [B. RELATED SECTIONS] to meet project specific applications and conditions. Specify section numbers in accordance with *CSI*® *MASTER FORMAT*® and section titles referenced. Remove any of the following that do not apply.)

1. 01 00 00 General Requirement
2. 04 20 00 Unit Masonry
3. 06 10 00 Rough Carpentry
4. 07 10 00 Dampproofing and Waterproofing
5. 07 21 00 Thermal Insulation
6. 07 26 00 Vapor Retarders
7. 07 27 00 Air Barriers
8. 07 65 00 Flexible Flashing
9. 07 90 00 Joint Protection
10. 07 92 00 Joint Sealants
11. 08 00 00 Openings
12. 09 96 00 High-Performance Coatings

## 1.02 REFERENCES

### A. ASTM International (ASTM)

1. ASTM C297 – Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
2. ASTM C794 – Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
3. ASTM C1193 – Standard Guide for Use of Joint Sealants
4. ASTM C1305 – Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane
5. ASTM D1970 – Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
6. ASTM D2247 – Standard Practice for Testing Water Resistance of Coatings in 100 % Relative Humidity
7. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials
8. ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials
9. ASTM E331 – Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
10. ASTM E2357 – Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies
11. ASTM G154 – Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

### B. American Architectural Manufacturers Association (AAMA)

1. AAMA 711 – Voluntary Specification for Self-Adhering Flashing Used for Installation of Exterior Wall Fenestration Products
2. AAMA 714-12 – Voluntary Specification for Liquid-Applied Flashing Used to Create a Water-Resistive Seal Around Exterior Wall Opening in Buildings

### C. Air Barrier Association of America (AABA)

1. Air Barrier Association of America Acceptance Criteria for Liquid Applied Membranes (Tested as part of an assembly)

### D. American Association of Textile Chemists and Colorists (AATCC)

1. AATCC TM127-2017(2018)e: Test Method for Water Resistance: Hydrostatic Pressure
- E. California Air Resources Board (CARB)
- F. South Coast Air Quality Management District (SCAQMD)

### 1.03 SUBMITTALS

- A. Refer to section 01 33 00 – Submittal Procedures (Specifier Note: Delete all that do not apply or have not been submitted.)  
(Specifier Note: Delete all that do not apply or have not been submitted.)
1. 01 33 13 – Certificates
  2. 01 33 16 – Design Data
  3. 01 33 19 – Field Test Reporting
  4. 01 33 23 – Shop Drawings, Product Data, and Samples
  5. 01 33 26 – Source Quality Control Reporting
  6. 01 33 29 – Sustainable Design Reporting
- B. Product Technical Data: Submit most current manufacturer technical literature for each type of product used including the following, but not limited to:
1. Preparation instructions and recommendations.
  2. Storage and handling requirements and recommendations.
  3. Installation methods.
- C. Samples: All products specified. Verify performance criteria and installation procedure.
- D. Quality Assurance Submittals
1. Manufacturer Instructions: Provide manufacturer's written installation instructions.

### 1.04 QUALITY ASSURANCE

- A. Installer Qualifications:
1. Installer to comply with quality assurance articles referenced in ASTM C1299 for installation of liquid applied sealants.
  2. Installer shall have documented OSI® QUAD® Window and Door System Certification with the installation of OSI® QUAD® Window and Door System.
  3. Installation shall be in accordance with manufacturer's installation guidelines and recommendations.
  4. Installer shall have documented history of successful project execution and installation of said product.
- B. Pre-Construction Mock-Up: (Specifier Note: Mock-ups are recommended for all projects using OSI® QUAD® Flash. Mock-up requirement will likely be included in the specification section for the wall cladding and/or windows. Include OSI® QUAD® Flash as part of the required mock-up.)
1. Install mock-up prior to installation using OSI® QUAD® Flash fluid applied flashing including surface preparation per fluid applied flashing manufacturer's

instructions. Obtain Architect/Engineer/Consultant or Owner's approval of joint treatments to establish adhesion, appearance, and workmanship standard.

- a. Mock-Up Size: **insert mock up dimensions**
- b. Mock-Up Substrate: **insert substrate** vertical surfaces as agreed to prior to Mock-up installation.
- c. Maintain mock-up during construction for workmanship standard.
- d. Mock-up to be incorporated into final construction upon Architect/Engineer/Consultant/Owner's written approval.

## 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle, and protect all products in accordance with Section 01 60 00, Product Requirements. (**Specifier Note: Review the following. Delete all that do not apply.**)
  1. 01 61 00 – Common Product Requirements
  2. 01 64 00 – Owner-Furnished Products.
  3. 01 65 00 – Product Delivery Requirements
  4. 01 66 00 – Product Storage and Handling Requirements
    - a. 01 66 13 – Product Storage and Handling Requirements for Hazardous Materials
    - b. 01 66 16 – Product Storage and Handling Requirements for Toxic Materials
- B. Deliver all OSI® QUAD® Flash materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Comply with manufacturer's ordering instructions and lead-time(s) required to avoid construction delays.
- D. Store OSI® QUAD® Flash materials as recommended by manufacturer. Refer to manufacturer Technical Data Sheet (TDS) available at [www.ositough.com](http://www.ositough.com).

## 1.06 PROJECT CONDITIONS

- A. Environmental Requirements:
  1. Verify substrates and ambient air temperature at project site before, during, and after application to assure compliance with manufacturer's recommendations.
    - a. Weather Conditions:
      - i) Apply in accordance with manufacturer's instructions. Refer to product Technical Data Sheets (TDS) available at [www.ositough.com](http://www.ositough.com).
      - ii) Compliance: Follow manufacturer's specific safety, health and environmental recommendations per most recent Safety Data Sheets, technical bulletins, and instructions. Handle all solvents in compliance with applicable EPA, OSHA, and VOC requirements regarding health/safety standards.

## 1.07 WARRANTY

- A. OSI® Limited Warranty:

1. OSI® products are warranted by Henkel Corporation to be free from defects in materials when used as directed. Henkel's sole obligation shall be, at its option, to replace or refund the purchase price of product proven to be defective. Henkel makes no other warranty – express or implied – including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE and will not be liable for consequential or incidental damages. This Limited Warranty gives you specific legal rights, which vary from state to state.
  - a. For warranty assistance, contact Henkel at 1.800.624.7767 M-F 9:00 AM to 4:00 PM ET.
2. Submit manufacturer's limited warranty at completion for projects that meet criteria to receive Manufacturers Limited Warranty.
  - a. Limited Warranty Areas: **insert limited warranty areas per specifier note here** (Specifier Note: Use warranty areas for description of work protected and areas of work excluded as required by project conditions. )

**PART 2 PRODUCTS** (Specifier Note: Product Information is proprietary to OSI® products. If additional products are required for competitive procurement, contact the Henkel Corporation for assistance – 1-800-624-7767, Mon. – Fri. 9:00AM – 4:00PM ET)

## 2.01 MANUFACTURER

- A. Approved Manufacturer:
1. Henkel Corporation:
    - a. Address: 26235 First Street, Westlake, OH 44145
    - b. Phone: 1-866-591-2178
    - c. Web Address: [www.ositough.com](http://www.ositough.com).

## 2.02 MATERIALS

- A. Description: OSI® QUAD® Flash Liquid Applied Flashing – Gun grade, trowel on waterproofing sealant for window and door flashing:
1. Appearance: Viscous paste
  2. Color: Yellow
  3. Composition: Silyl-terminated Polyether
  4. Flashing System Applications: Waterproofing sealant compound designed for flashing rough openings of structural walls.
  5. VOC Content (CARB): 2.2%
    - a. SCAQMD rule 1168 30 g/L, maximum
  6. Flash Point: >200°F (>93°C)
  7. Shelf Life: 12 months from date of manufacture (unopened)
- B. Application Properties:
1. Surface and ambient application temperatures: 40°F (4°C) and 110°F (43°C) during application and cure
    - a. Product may be applied to frost-free substrates at temperatures below 32°F (0°C) but will not start to cure until temperature rises to and remains above 32°F (0°C)
  2. Skin Time: 20-40 minutes (Time is dependent on temperature, humidity and thickness of flashing applied)
  3. Cure Time: 4-6 hours (At 70°F (21°C) & 50% relative humidity [Time is dependent on temperature, humidity and thickness of flashing applied])

C. Performance Properties:

1. Required Application Thickness: 12-15 mil
2. Service Temperature: -75°F to 300°F (-59°C to 149°C)
3. Hardness (ASTM D661): Shore A, 35–45
4. Tensile Strength (ASTM D412): >150 psi
5. Elongation (ASTM D412): >350%
6. Water Vapor Transmission (ASTM E96): 21 perms
  - a. Air Leakage of Air Barrier Assemblies (ASTM E2357 [Product tested as part of assembly]): 0.105 L/s.m<sup>2</sup> @ 75 Pa
7. Surface Burning Characteristics (ASTM E88): [Class A Building Material]
  - a. Flame Spread: 15
  - b. Smoke Development: 10
  - c. Air Leakage of Air Barrier Assemblies (ASTM E2357):
    - i) 0.0105 L/s·m<sup>2</sup> at 75 Pa (Product tested as part of assembly)

## 2.03 ACCESSORIES

A. General:

1. Verify compatibility of any product that makes physical contact with or is used in combination with OSI® QUAD® Flash.

B. Product Specific Application Equipment & Tools: (Specifier Note: Remove sections below that do not apply to project specific conditions. Include additional sections that aren't explicitly outlined below but are part of project scope and conditions.)

1. Sausage gun
2. Trowel

C. Adhesive Primers: Use primers only as recommended by liquid applied flashing manufacturer where required for adhesion of liquid applied flashing to substrates indicated and as determined for use from pre-construction mock-up testing. (Specifier Note: Edit the following. Installer shall use manufacturer approved adhesive primer and verify compatibility. Specify manufacturer approved primer below. Delete this section if primer is not specified.)

1. Specify manufacturer approved adhesive primer.

D. Flashing Tape: Self adhering sheet flashing tape with manufacturer approved facer material may be used to provide a suitable substrate for adequate adhesion of OSI® QUAD® Flash. (Specifier Note: Edit the following. Installer shall use manufacturer approved flashing tape and verify compatibility. Specify manufacturer approved flashing tape below. Delete this section if flashing tape is not specified.)

1. Specify manufacturer approved flashing tape

E. Joint Sealant: Use manufacturer approved joint sealant that complies with ASTM C920: elastomeric polymer sealant to maintain watertight conditions. (Specifier Note: Edit the following. Installer shall use manufacturer approved joint sealant and verify compatibility. Specify manufacturer approved joint sealant below. Delete this section if joint sealant is not specified.)

1. Specify manufacturer approved joint sealant.

- F. Foam: Use manufacturer approved low pressure foam that conforms with ASTM E2112: standard practice for installation of exterior windows, doors, and skylights. (Specifier Note: Edit the following. Installer shall use manufacturer approved foam and verify compatibility. Specify manufacturer approved foam below. Delete this section if foam is not specified.)
1. Specify manufacturer approved foam.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify substrate and surface conditions are in accordance with liquid applied flashing manufacturer recommended tolerances prior to installation.
- B. Review requirements for sequencing of installation of liquid applied flashing with installation of windows, doors, louvers, and wall penetrations to provide a weather-tight flashing assembly.

### **3.02 PREPARATION**

- A. General:
  1. Installer shall refer to manufacturer approved installation instructions and individual product Technical Data Sheets (TDS) for required environmental installation conditions and surface/substrate preparation. [www.ositough.com](http://www.ositough.com)

### **3.03 FIELD QUALITY CONTROL**

- A. Notify manufacturer's designated representative to obtain periodic observations of flexible flashing assembly installation.
- B. Field Adhesion testing is recommended for unverified or unapproved substrates. Contact designated manufacturer representative for consultation.

### **3.04 INSTALLATION**

- A. General:
  1. For comprehensive installation instruction, refer to **OSI® INSTALLATION GUIDE**.
    - a. [Follow this link to download the OSI® Installation Guide](#)
      - i) Contact Henkel Sales Representative for any additional assistance with the *OSI® Installation Guide*, training, and installation scenarios not explicitly outlined within *OSI® Installation Guide*.
      - ii) For additional information refer to product Technical Data Sheets (TDS) available at [www.ositough.com](http://www.ositough.com).

### **3.05 CLEANING AND PROTECTION**

- A. For additional information refer to product Technical Data Sheets (TDS) available at [www.ositough.com](http://www.ositough.com).

**END OF SECTION**