TECHNICAL DATA SHEET

LIQUID APPLIED FLASHING MEMBRANE

QUAD FLASH

ALL WEATHER APPLICATION

Description: Quad Flash – Liquid Applied Flashing Membrane 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 as little as 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.

Available As:

Item #	Size	Color	Packaging
2137033	20 oz	Yellow	Sausage

Features & Benefits:

- Breathable Liquid Applied Membrane for Window Installations
- All Weather Application
- Strong Bond and UV Resistant
- May be exposed to weather for up to 12 months without compromising performance
- Will not tear or lose effectiveness when exposed to weather during construction
- Paintable after 2 hours with most latex paints
- Meets AAMA 714-12, ICC-ES AC212, ABAA Criteria for Liquid Applied Membrane, ASTM E84 specifications

Recommended For:

Quad Flash offers excellent performance on both vertical or horizontal above grade applications to plywood, OSB, XPS, Aluminum, Coated Aluminum, Galvanized Steel, EPS, Densglass, Concrete & Masonry, Vinyl, Wood, FRP, EPDM and most other building materials.

For Best Results:

- Not for use as a structural sealant
- Not for use in place of appropriate through-wall flashing
- Not for use below grade or in locations designed to be continuously immersed in water
- Do not apply to surfaces with standing water or frost
- Pressure-treated lumber should be wiped with a solvent wipe prior to product application
- Keep containers closed and out of direct sunlight when not in use
- In low humidity conditions, curing may take longer than 12 hours. Lightly misting treated surfaces with fresh water will accelerate curing
- If air or surface temperatures exceed 95°F (35°C), apply to shaded surfaces and before daytime air and surface temperatures reach their peak. Hot surfaces may be cooled with a mist of fresh water

Coverage:

For a 20 oz sausage pack:

- 15-17 sq.ft per sausage applied at 12-15 mils

Note: Coverage varies based on surface texture and irregularities

Typical Uncured Physical Properties:

Color:	Yellow	
Appearance:	Viscous paste	
Base:	Silyl-terminated polyether	
Odor:	Mild	
Specific Gravity:	1.40 – 1.55	
Flash Point:	>200°F (>93°C)	
% Solids by Weight:	99%	
VOC Content:	2.2%	CARB
	30 g/L, maximum	SCAQMD rule 1168
Shelf Life:	12 months from date of manufacture (unopened)	
Lot Code Explanation:	**XXXXX - YYDDD** **XXXXX** = Disregard (Manufacturing Order) **YY** = Last two digits of year of manufacture **DDD** = Day of the year based on 365 days Example: 91681-16137 = Manufacturing order 91681 made on 137th day (May 17th) of 2016	

Typical Application Properties:

Application Temperature:	Surface and ambient temperatures should be between 40°F (4°C) and 110°F (43°C) during application and cure 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)	
Skin Time:	20-40 minutes*	
Cure Time:	4-6 hours*	At 70°F (21°C) & 50% relative humidity
	*Time is dependent on temperature, humidity and thickness of flashing applied	

Typical Cured Performance Properties:

Color:	Yellow	
Service Temperature:	-75°F to 300°F (-59°C to 149°C)	
Hardness:	35-45	Shore A
Tensile Strength:	>150 psi	ASTM D 412
Elongation at Break:	>350%	ASTM D 412
Water Vapor Transmission	21 perms	ASTM E 96
Surface Burning Characteristics Flame Spread: Smoke Developed:	 15 10	ASTM E 84 Class A Building Material
Air Leakage of Air Barrier Assemblies:	0.0105 L/s·m² at 75 Pa	ASTM E 2357 (Product tested as part of assembly)
Specifications*:	▪ AAMA 714-12 : Voluntary Specification for Liquid-Applied Flashing Used to Create a Water-Resistive Seal Around Exterior Wall Opening in Buildings ▪ ICC-ES AC212: Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers Over Exterior Sheathing (Tested as part of an assembly) ▪ ABAA: Air Barrier Association of America Acceptance Criteria for Liquid Applied Membranes (Tested as part of an assembly) ▪ ASTM E 84 Class A Building Material	

*See Page 4 for further details on specification testing

Directions:

Tools Typically Required:
Professional caulking gun, dry joint knife, trowel or spatula for spreading

Safety Precautions:
Always wear eye protection, gloves and proper work clothes when using OSI QUAD Flash. Wash hands after use. Protect all surfaces not intended to receive QUAD Flash.

Preparation:
Surface Preparation: To ensure best results, surfaces should be clean, free of standing water, frost and other contaminants, and in good repair before application. Damaged sheathing should be removed and replaced. Any gaps or joints greater than 1 inch should be structurally repaired or readied for an appropriate transition membrane. Ensure positive drainage at all rough openings. Chemical residues, surface coatings or films may adversely affect adhesion. Pressure-treated wood and other contaminated surfaces should be cleaned with a solvent wipe before application.

Application Conditions: Surface and ambient temperatures should be between 40°F (4°C) and 110°F (43°C) during application and drying. Wind and high temperatures will accelerate drying. If air or surface temperatures exceed 95°F (35°C), apply to shaded surfaces and before daytime air and surface temperatures reach their peak. Hot surfaces may be cooled with a mist of fresh water. 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). In low humidity conditions, curing may take longer than 12 hours. Lightly misting treated surfaces with fresh water will accelerate curing. Product may be applied to damp surfaces (no standing water or frost) and tolerates rain immediately after application.

Application:

Training for proper application of Quad Flash can be found at OSITough.com/training; click on CMU window tutorial.

1. Place sausage pack inside of gun.
2. Using a knife or pair of sharp cutters, remove the tip of the package just below the metal staple.
3. Cut the nozzle to the desired width, place nozzle in lid and screw back onto barrel gun.
4. Apply a bead of product to each corner of the rough opening. Apply additional product in a zigzag pattern over the exterior framing inside the rough opening. Spread the wet product to create an opaque, monolithic flashing membrane.
5. Apply a thick bead of Quad Flash in a zigzag pattern to the exterior wall surrounding the rough opening. Spread the product to create an opaque, monolithic flashing membrane at 12-15 mils which surrounds the rough opening and extends up to 4 to 6 inches over the face of the exterior wall. Refer to your local building codes for specific design recommendations. NOTE: When using with existing sheet weather resistive barriers, extend QUAD Flash 8-10 inches over the face of the exterior wall to ensure positive drainage.
6. Allow treated surfaces to skin (approx. 20-40 minutes) before installing windows, doors and other wall assembly, waterproofing or air barrier components.

Clean-up:
Clean tools and uncured product residue immediately after use with mineral spirits or similar solvent. Remove cured product mechanically using a sharp-edged tool.

Storage & Disposal:

Store in a cool, dry place. Keep container tightly closed when not dispensing. Do not open container until preparation work has been completed. Do not alter or mix with other chemicals. When stored at or below 80°F (27°C), QUAD® Flash has a shelf life of 12 months after the date of manufacture. This shelf life assumes upright storage of factory-sealed containers. Do not double stack pallets. Dispose of unused product and container in accordance with local, state and federal regulations.

Label Precautions:

WARNING! Uncured Sealant irritates eyes & skin. May cause allergic skin reaction.

WARNING! Contains amino silane and crystillane silica. Avoid eye and skin contact. Prolonged or repeated skin contact with uncured sealant may cause sensitization. Wear gloves and safety glasses when applying product. Remove contact lenses before using sealant. Wash hands after using. FIRST AID: For eye contact flush with water for 15 minutes. Call a physician if irritation develops and persists. For skin contact, wash with soap and water. If affected by inhalation, remove to fresh air and get medical attention. If ingested, do not induce vomiting; call a physician or Poison Control Center. **DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN.**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Refer to the Safety Data Sheet (SDS) for further information.

Limited Warranty:

This product is warranted 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. Henkel may be contacted at 1.800.624.7767 M-F 9:00 am to 4:00 pm ET for warranty assistance.

AAMA 714-12: Voluntary specification for Liquid-Applied Flashing used to create a water resistive seal around exterior wall openings in buildings			
TEST	**METHOD**	**CRITERIA**	**RESULTS**
Adhesive Strength to Substrates	ASTM C 794	≥ 5 pli	Pass
Water Penetration Around Nails	Modified ASTM D 1970 AAMA 711 Section 5.3	Shall pass 31 mm (1.2 in) of water	Pass
Accelerated UV Aging Peel Adhesion Appearance	ASTM G 154, UVA cycle 1 ASTM C 794, Visual	≥ 5 pli	Pass
Elevated Temperature Exposure, Level 3=176° F for 7 days	AAMA 711 ASTM C 794	≥ 5 pli	Pass
Thermal Cycling (10 cycles) Peel Adhesion	AAMA 711 ASTM C 794	≥ 5 pli	Pass
Crack Bridging	ASTM C 1305	Water holdout of 550 millimeters for 24 hours with 1/8-inch crack after cycling per ATM C 1305 for 10 cycles.	Pass
Water Immersion	AAMA 711 ASTM C 794	≥ 5 pli	Pass
Water Vapor Permeability	ASTM E 96 Wet Cup	Minimum of 10 perms at manufacturer's recommended application thickness	Pass – 21 perms
Damp Surfaces	ASTM C 794	≥ 5 pli	Pass
ICC-ES AC212[1]**:** Acceptance criteria for water resistive coatings used as water resistive barriers over exterior sheathing (*tested as part of an assembly)			
*Tensile Bond	ASTM C 297	Minimum 15 psi (105 kPa)	Pass
*Freeze-Thaw	ICC-ES AC212	No cracking, checking, crazing, erosion, delamination or other deleterious effects	Pass
*Water Resistance	ASTM D 2247	No cracking, checking, crazing, erosion, delamination or other deleterious effects	Pass
*Water Penetration	ASTM E 331	No visible water penetration at sheathing joints as viewed from back of the panel.	Pass
*Weathering	ICC-ES AC212 AATCC[2] 127	No cracking of the coating; no water penetration.	Pass
ABAA: Air Barrier Association of America acceptance criteria for liquid applied membranes (*Tested as part of an assembly)			
*Air Leakage of Air Barrier Assemblies	ASTM E 2357	≤ 0.2 L / s·m2 at 75 Pa (≤ 0.04 cfm / ft2 at 1.57 psf)	Pass: 0.0105 L / s·m2 at 75 Pa (0.0021 cfm / ft2 at 1.57 psf)
Fire Testing			
Surface Burning Characteristics	ASTM E 84	Criteria for ICC and NFPA Class A Building Material: Flame Spread ≤ 25 Smoke Developed ≤ 450	Meets Class A Building Material Flame Spread: 15 Smoke Developed: 10

All testing was completed by independent, accredited laboratories.

[1]International Code Council Evaluation Service Acceptance Criteria
[2]American Association of Textile Chemists and Colorists

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Disclaimer:

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