



TECHNICAL DATA SHEET

Revision: October 26, 2018
Supersedes: New
Ref. #: 643185

WINDOW, DOOR & SIDING SEALANT



DESCRIPTION

OSI® QUAD® MAX Clear is the next generation of siding, window and door sealants that offers maximum durability and application performance for use in many interior or exterior conditions. It has been proven to stick on wet and cold surfaces and offers long term durability against the harmful effects of sun exposure. Unlike traditional solvent sealants, QUAD MAX Clear is resistant to bubbling and has no shrinkage. By providing superior protection against air and moisture, you've done it right the first time.

Available As:

| Item # | Size | Color |
|---------|--------------------------------|-----------|
| 2445634 | 9.0 fl. oz. (280 ml) cartridge | Clear 000 |

FEATURES & BENEFITS

- Flexibility: ± 50% Joint Movement Capability
- Easy to Use in All Temperatures: 0°F to 140°F Application
- 24 Hour Fast Cure for Quicker Protection*
- Excellent dirt & dust resistance
- Immediately water resistant
- Paintable in 1 Hour*
- Strong Adhesion to Most Building Materials Without Primer

**Cure time is dependent on temperature, humidity and depth of sealant applied*

RECOMMENDED FOR

OSI QUAD Max Clear is designed for interior/exterior use for sealing around windows, doors and siding. It bonds to a wide variety of materials without need for a primer such as fiber cement, cedar, brick, stone, XPS, EPS, coated aluminum, fiberglass, vinyl, PVC, stucco, EIFS, wood, glass, concrete, masonry, flashing tapes and Kynar® coatings.

LIMITATIONS

- DO NOT TOOL or smear/feather on prefinished colored claddings (i.e. siding, trim, etc.) as this will reduce any sealants ability to withstand UV exposure and joint movement, causing premature joint failure and sealant whitening.
- DO NOT use as a nail hole filler or in touch-up applications on prefinished exterior building materials. Follow prefinished cladding manufacturer's instructions for nail hole filling
- Not recommended for field joint/butt joint applications on pre-finished exterior claddings and trim materials
- Do not use on joints immersed in water or applications requiring continuous water immersion
- Do not use on roof applications including but not limited to metal roof panels, or on log homes
- Do not use as a traffic bearing sealant
- For joints deeper than 3/8" (9.5 mm), a backing material should be used
- If the sealant bead is exposed to rain before it is fully cured a slight haze or fogginess may develop on the surface. This is temporary, and the bead will turn clear again once the rain stops, and the sealant bead fully cures. This is a surface phenomenon only and does not affect the performance of the sealant in any way

COVERAGE

For a 9.0 fl. oz. (280 ml) cartridge:

- | | |
|--|--|
| • A 1/4" (6 mm) bead extrudes approximately 28.0 ft. (8.5 m) | • A 3/8" (9.5 mm) bead extrudes approximately 12.6 ft. (3.8 m) |
|--|--|





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TECHNICAL DATA

Typical Uncured Physical Properties:

| | | | | |
|--------------------------|---|---------------------|---|------------------|
| Color: | Clear | VOC Content: | 2.95% by weight | CARB |
| Appearance: | Non-slumping paste | | 53.3 g/l | SCAQMD rule 1168 |
| Base: | Silane Modified Polymer | Lot Code | YYDDD | |
| Odor: | Alcohol | Explanation: | YY= Last two digits of year of manufacture DDD= Day of manufacture based on 365 days in a Year | |
| Specific Gravity: | 1.04 | Example: | 18061 = 61 st day of 2018 = March 2, 2018 | |
| Shelf Life: | 18 months from date of manufacture (unopened) | | | |

Typical Application Properties:

| | | | |
|---------------------------------|--|---|--|
| Application Temperature: | Can be applied between 0°F (-18°C) and 140°F (60°C) For easier extrusion of sealant at lower temperatures, store cartridge at room temperature at least 24 hours prior to use | | |
| Skin Formation Time: | 8-10 minutes* | At 72°F and 70% relative humidity | |
| Tack-free Time: | < 24 hours | At 72°F and 70% relative humidity | |
| Cure Time: | 24-72 hours* | *Cure time is dependent on temperature, humidity and depth of sealant applied | |
| Vertical Sag: | 0.1 inches | ASTM C639 | |

Typical Cured Performance Properties:

| | | | | |
|-----------------------------|---|---|---------|-----------|
| Color: | Clear | Hardness: | 44 | ASTM C661 |
| Service Temperature: | -14°F (-25°C) to 158°F (70°C) | Joint Movement: | ± 50% | ASTM C719 |
| Water Resistant: | Yes | Tensile Strength: | 387 psi | ASTM D412 |
| Paintable: | Yes, with latex paint or primer | Maximum Elongation: | 458% | ASTM D412 |
| Bubble Resistant: | Yes | Specifications: Meets the performance requirements of: <ul style="list-style-type: none"> ASTM C 920: Type S, Grade NS, Use NT, Class 50, M, G and A Federal Spec. TT-S-00230C, Type II AAMA 808.3 (Type I) Exterior Perimeter Sealing AAMA 802.3 (Type I) & 805.2 (Group C) Back Bedding/Glazing AAMA 713-08 Chemical Compatibility of Sealants ASTM C1382 (EIFS) GreenGuard® Certified | | |
| Nail-Hole Filling: | DO NOT use as a nail hole filler or in touch-up applications on prefinished colored claddings and trim. Suitable only on unfinished or primed siding materials prior to painting. Follow prefinished cladding manufacturer's instructions for nail hole filling. | | | |
| 180° Peel Adhesion: | ASTM C794 | | | |
| PVC Trim: | 27.3 lb./in | | | |
| Fiber Cement: | 15.3 lb./in | | | |
| Coated Aluminum: | 16.4 lb./in | | | |
| Vinyl Siding: | 54.7 lb./in | | | |
| Brick: | 8.5 lb./in | | | |
| Fiberglass: | 9.8 lb./in | | | |

DIRECTIONS

Tools Typically Required: Utility knife and caulking gun. For best application results, OSI recommends the use of a high-quality caulking gun such as the Albion® B12 Cartridge Gun.

Safety Precautions: Wear gloves and wash hands after use.

Surface Preparation: All surfaces should be clean, dry, and free of all contaminants, such as, old caulking, grease, dust, and any other material that can interfere with adhesion. Remove any ice, snow, or frost that may be present on substrates. For more information refer to cladding manufacturer's instructions for approved cleaning methods. Ensure proper drain plane design to avoid trapped water and or moisture. The combination of trapped moisture and other variables will tend to create back pressure and cause sealant bubbling regardless of technology. While QUAD MAX Clear is generally considered a non-priming sealant, special circumstances or substrates may require a primer. It is the user's responsibility to test substrate compatibility and the adhesion of the cured sealant on a test joint before applying to the entire project.



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DIRECTIONS

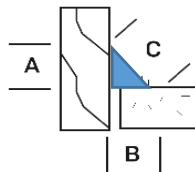
Masonry: Concrete, stone, stucco and other masonry must be cleaned where necessary by grinding or wire brushing to expose a sound surface free of contamination and laitance. Concrete must be fully cured and free of release agents.

Wood and painted wood: New and weathered wood must be clean and structurally sound. Cut back weathered surfaces and dry rot until clean, sound wood is reached. Scrape away paint to bare wood. Any coating that cannot be removed must be tested to verify adhesion of the sealant. QUAD MAX Clear will adhere to most new and old, dry, oil-free wood.

Metal: Remove scale, rust, and residue from metal to expose a bright metal sheen by wire brushing. Remove any chemical residue, film/oils, and loose or incompatible coatings using the appropriate solvent. Any coating that cannot be removed must be tested to verify adhesion of the sealant. Remove any other coatings or finishes that could interfere with adhesion. An adhesion test is recommended for anodized aluminum or any questionable substrates.

Joint Preparation: The number of joints and the joint width should be designed for a maximum of $\pm 50\%$ joint movement from the initial joint width. The depth of the sealant joint should be one-half the width of the joint. The maximum depth is $\frac{1}{2}$ inch (13 mm) and the minimum is $\frac{1}{4}$ " (6 mm). The minimum recommended joint width is $\frac{1}{4}$ " inch and the maximum recommended joint width is $\frac{5}{8}$ " inches (15 mm). See table below.

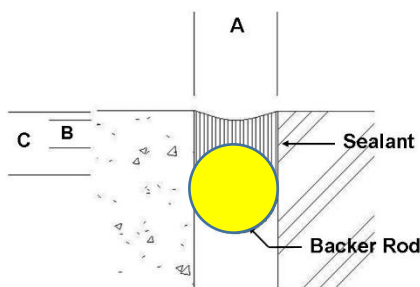
| Joint Width (inches) | Sealant Depth @ Midpoint (inches) | Joint Width (mm) | Sealant Depth @ Midpoint (mm) |
|----------------------|-----------------------------------|------------------|-------------------------------|
| 1/4 | 1/4 | 6 | 6 |
| 1/2 | 1/4 | 13 | 6 |
| 5/8 | 1/2 | 15 | 13 |



Fillet Joint Design

Fig. 1

- Dimension A and B must be a minimum of $\frac{1}{4}$ "
- Dimension C must be a minimum of $\frac{3}{8}$ "



Control Joint Design

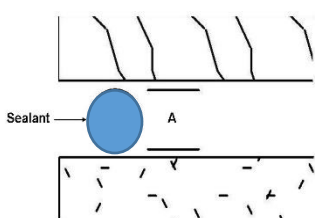
Fig. 2

- Dimension A must be a minimum of $\frac{3}{8}$ " or maximum of $\frac{5}{8}$ "
- Dimension B must be a minimum of $\frac{1}{4}$ " depth
- Dimension C can be a maximum of $\frac{1}{2}$ "

Dynamic Joint Design

- Dimension A can be up to $\frac{5}{8}$ " wide
- Dimension B must be $\frac{3}{8}$ " in depth
- Dimension C must be a maximum depth of $\frac{1}{2}$ "

NOTE: Form bead to a concave shape keeping sealant inside the joint edges. DO NOT bridge the sealant or smear beyond the joint edges otherwise it may result in whitening of the sealant on prefinished siding and trim materials. Tooling spatula recommended. Size to joint width. Use masking tape to prevent smearing of sealant if necessary.



Bedding Bead Structure

- Dimension A must be a $\frac{3}{8}$ " rounded sealant bead
- Apply sealant to substrate.
- Minimize pressure when applying sealant to maintain a rounded bead
- Compress sealant between both substrates
- Avoid excessive substrate movement after compression. Movement of the substrates can smear sealant and breakdown the sealants capacity to maintain a seal.

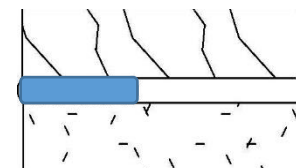


Fig. 3



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DIRECTIONS

If the depth of the joint exceeds 3/8" (9.5 mm) the use of a backer rod such as a Closed-Cell Backer-Rod or Soft Backer-Rod is recommended. Where the joint depth does not permit the use of backer-rod, a bond breaker (polyethylene strip) must be used to prevent three-sided adhesion. To maintain the recommended sealant depth, install backer-rod by compressing and rolling it into the joint channel without stretching it lengthwise. Closed-Cell Backer-Rod should be approximately 1/8" (3 mm) larger in diameter than the width of the joint to allow for compression. Soft Backer-Rod should be approximately 25% larger in diameter than the joint width. Backer-rod becomes an integral part of the joint. The sealant does not adhere to it, and no separate bond breaker is required. Do not prime or puncture the backer-rod.

General Preparation: The temperature of the product, the surfaces and the working area should be between 0°F (-18°C) and 140°F (60°C). For best performance, store cartridge at room temperature at least 24 hours before use. Unscrew nozzle from the top of caulk tube, cut off nub above the threads, and screw nozzle back onto cartridge. Cut the nozzle at a 30° to 45° angle with a sharp blade and insert cartridge into a high-quality caulking gun and dispense a 3/8" bead of sealant for optimal joint protection. For more information, refer to ASTM C1193 – Standard Guide for Use of Joint Sealants.

Application Instructions:

Using a caulking gun, the sealant can be pushed or pulled when applying but positive pressure should be maintained throughout extrusion. Use steady pressure to force sealant into joint ensuring an adequate and even bond of sealant to substrate and to maintain consistency avoiding irregular bead shapes, such as, too small or too large. If the depth of the joint exceeds 3/8" (9.5 mm) the use of a backer rod is recommended. Always apply sealant in a bead form. A fillet joint is formed when two surfaces come together to form a right angle (see Fig. 1). The sealant used to join these two surfaces is triangular in shape. Masking tape can be used to ensure a clean application. **DO NOT TOOL** or smear/feather on prefinished colored claddings (i.e. siding, trim) as this will reduce any sealants ability to withstand UV exposure and joint movement, causing premature joint failure and whitening of sealant. If masking tape is used along the sides of the joint to prevent surface smearing, ensure the tape is removed immediately by pulling the tape away. Full cure may take 24-72 hours or longer depending on ambient conditions and volume of sealant used. Sealant is paintable in 1 hour*. High quality latex paint is recommended. If using oil based/alkyd paint, a latex primer should be used first. (See **OSI BEST PRACTICE GUIDE FOR PROPER INSTALLATION**).

Tips on Terminating Sealant Beads:

- **Terminating Beads at the End of a Joint:** When terminating a bead at the end of a joint, first release dispensing gun pressure to prevent run-on by pressing the release trigger, then use a twist and pinch motion at a sharp angle to sever the bead. In the event of excess string formation, guide onto existing bead. **DO NOT** pull or smear the bead onto adjacent surfaces like cladding or trim materials. **DO NOT TOOL** on prefinished cladding or trim materials.
- **Terminating Beads that will be Continued:** When terminating a bead that is to be continued (i.e. at the end of a tube), first release dispensing gun pressure to prevent run-on by pressing the release trigger. Next, pinch-off the bead by pressing the nozzle onto the joint surface to cut-off the bead. **DO NOT** smear bead onto adjacent surfaces. This action will create a slight smear inside the joint. Cover this smear with the start of the next bead

DO NOT TOOL: Do Not Tool or smear/feather sealant on prefinished colored claddings (i.e. siding, trim) as this will reduce any sealants ability to withstand UV exposure and joint movement, causing premature joint failure and sealant whitening. If smearing/feathering of the sealant occurs, painting over the smeared areas will be the only corrective resolution.

DO NOT USE AS NAIL HOLE FILLER: **DO NOT** use as a nail hole filler or in touch-up applications. Doing so will limit the sealant's ability to withstand UV exposure, and will result in fading or "white out" within six months. Follow prefinished cladding manufacturer's instructions for nail hole filling.

BUTT / FIELD JOINT APPLICATIONS: QUAD MAX Clear is not recommended for field joint/butt joint applications on pre-finished siding and trim materials. However, QUAD MAX Clear may be used in butt or field joint applications on unfinished or primed siding and trim materials prior to painting. Care must be taken to NOT smear the sealant beyond the joint edges. Masking tape can be used to ensure a clean application. It should be noted that joint widths of less than 1/4" and 1/4" in depth will become "maintenance" situations and need to be inspected regularly for premature failure. The reason being that joints less than 1/4" are too small to accommodate a sufficient amount of sealant in the joint to warrant long term durability. If the sealant is showing signs of degradation, remove sealant and apply fresh sealant to the joint. What is important to know is that all sealants will require maintenance and sometimes replacement, because of the effects of aging, insufficient sealant used, or because of poor joint design. When using prefinished exterior claddings (i.e. siding and trim) please refer to manufacturer's instructions for proper installation.

CONTROL / DYNAMIC JOINT APPLICATIONS: For control and dynamic joints form bead to a concave shape (see Fig. 2). Use of a spatula, sized to joint width. Care must be taken to NOT smear the sealant beyond the joint edges. Masking tape can be used to ensure a clean application and prevent smearing sealant on adjacent surfaces.

COMMERCIAL APPLICATIONS: For all commercial applications or applications not mentioned herein contact Henkel Technical support for review of intended use.

PAINTABILITY: QUAD MAX Clear can be painted one hour after application using a high quality exterior latex paint. In situations where less humidity is present it is important to wait until a skin has formed over the sealant before painting. In joints that have a high degree of movement capability, the paint can crack, distort, or delaminate from the substrate. The reason for this is simple: the paint does not have the flexibility of a high movement/ Class 50 sealant, such as, QUAD MAX Clear. It is the responsibility of the applicator to conduct on-site testing to determine compatibility and adhesion.

Clean-up: Clean tools and uncured sealant residue immediately with mineral spirits or paint thinner following solvent manufacturers precautions. Cured sealant must be carefully cut away with a sharp-edged tool. **NOTE:** Use of solvents may damage prefinished siding and trim materials. Always test a small area before proceeding. Painting affected areas may be only remedy.



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STORAGE & DISPOSAL

NOT DAMAGED BY FREEZING. Store away from heat, flame and spark in a cool, dry, well-ventilated area. Storing product in too hot or too cold of conditions will considerably reduce Shelf Life of unopened containers. Use an approved hazardous waste facility for disposal.

LABEL PRECAUTIONS

WARNING! UNCURED SEALANT IRRITATES EYES, SKIN, AND RESPIRATORY TRACT.

WARNING! Contains silane and acid ester. May be harmful if inhaled or swallowed. Methanol is released during application and cure, which may affect the nervous system causing dizziness, headache or nausea. Use in a well-ventilated area. Do not breathe vapors. Avoid eye and skin contact. Prolonged or repeated skin contact with uncured sealant may cause irritation. 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 thoroughly 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. immediately. **DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN.**



WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov.

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

DISCLAIMER

The information and recommendations contained herein are based on our research and are believed to be accurate, but no warranty, express or implied, is made or should be inferred. Henkel recommends purchasers/users should test the products to determine acceptable quality and suitability for the intended use. All adhesive/sealant applications should be tested under simulated or actual end use conditions to ensure the adhesive/sealant meets or exceeds all required project specifications. Since assembly conditions may be critical to adhesive/sealant performance, it is also recommended that testing be performed on specimens assembled under simulated or actual production conditions. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

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OSI Tougher than the Elements. For Professional Use Only. The Battle will be Fierce.

OSI works side by side with residential builders, contractors and remodeling professionals who use our products every day on their jobsites. OSI combines this deep understanding with the sophisticated global innovation and manufacturing excellence of Henkel to make the world's best professional-grade caulks, sealants and adhesives.

For Technical Assistance call: 1-800-624-7767 – Mon-Fri - 9:00a – 4:00p ET
www.ositough.com



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