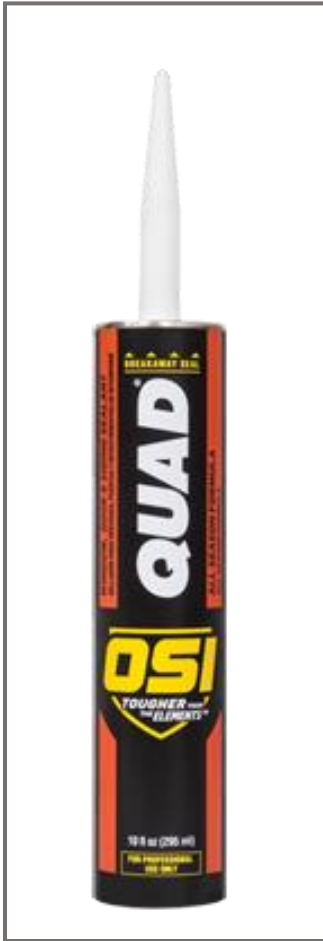




TECHNICAL DATA SHEET

Revision: August 14, 2018
Supersedes: November 14, 2012
Ref. #: 445275



WINDOW, DOOR & SIDING SEALANT

QUAD®

ALL SEASON FORMULA

DESCRIPTION:

OSI® QUAD® Window, Door & Siding Sealant is an all-season formula designed for use on exterior window, door and siding applications in residential and low-rise building construction. Unlike most other sealants, it resists dirt & dust collection, yellowing and water washout. OSI QUAD requires no tooling and once cured is paintable with latex paints. OSI QUAD is composed of elastomeric polymers and high quality synthetic resins. This product offers the superior adhesion characteristics and elasticity found in high performance sealants. It yields a tough, rubbery seal which resists outdoor weather-related elements. It goes on smoothly and has easy cut-off without stringing.

Available As:

Item #	Size	Color
1642878	10.0 fl oz (295 ml) cartridge	White (001) – 4.0% VOC

FEATURES & BENEFITS:

- All-Weather Application, 20°F-100°F
- Permanently Flexible: ± 25% Joint Movement Capability
- UV and Water Resistant – will not crack or yellow
- Resists Dust & Dirt Collection
- Paintable when cured*

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

RECOMMENDED FOR:

OSI QUAD is used to seal around exterior windows and doors, fiber-cement and vinyl siding, PVC trim, and gutters in residential and low-rise building construction. Sealant bonds without a primer to most common substrates like cedar, painted or stained woods, fiberglass, vinyl, coated aluminum, steel, metal, brick, masonry and concrete.

LIMITATIONS:

- Do not use for sealing expansion joints, including butt joints
- Do not use on joints immersed in water or applications requiring continuous water immersion
- Do not use as a traffic bearing sealant or on log homes
- Not compatible with polystyrene foams and polypropylene or polyethylene plastics
- Not compatible with bitumen-based products such as flashing tapes. Damage or color bleed through may occur
- Should not be used in applications less than ¼" in depth or ¼" wide in order to maintain the integrity of the sealant
- For joints deeper than 3/8" (9.5 mm), a backing material should be used
- Tooling of the sealant is not necessary or recommended
- DO NOT TOOL, smear or 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 color fading.
- DO NOT use as a nail hole filler or in touch-up applications. Follow prefinished cladding manufacturer's instructions for nail hole filling

COVERAGE

For a 10 fl. oz. (295 ml) cartridge:

- | | |
|--|--|
| • A 1/4" (6 mm) bead extrudes approximately 30.6 ft. (9.3 m) | • A 3/8" (9.5 mm) bead extrudes approximately 13.6 ft. (4.1 m) |
|--|--|



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TECHNICAL DATA

Typical Uncured Physical Properties:

Color:	White	VOC Content:	<4.0% by weight	CARB
Appearance:	Non-slumping paste	White only	217 g/l	SCAQMD rule 1168
Base:	Elastomeric polymers and synthetic resins			
Odor:	Solvent	Shelf Life:	24 months from date of manufacture (unopened)	
Specific Gravity:	1.30	Lot Code	YYDDD	
Flashpoint:	Product is a solid. Burn Rate: <2.2mm/second	Explanation:	YY= Last two digits of year of manufacture DDD= Day of manufacture based on 365 days in a year	
Flammability:	Solid that does not burn, or burns with difficulty	Example:	14061 = 61 st day of 2014 = March 2, 2014	

Typical Application Properties:

Application Temperature:	Can be applied between 20°F (-7°C) and 100°F (38°C) For easier extrusion of sealant at lower temperatures, store cartridge at room temperature at least 24 hours prior to use		
Skin Formation Time:	4-6 minutes*	At 72°F and 70% relative humidity	
Tack-free Time:	10 hours	At 72°F and 70% relative humidity	
Cure Time:	7-14 days or longer*	*Cure time is dependent on temperature, humidity and depth of sealant applied	
Extrusion Rate:	42 ml/min	ASTM C1183 (Procedure A)	
Vertical Sag:	0 inches	ASTM C639	

Typical Cured Performance Properties:

Color:	White	Shrinkage:	23%
Service Temperature:	-20°F (-29°C) to 200°F (93°C)	Hardness:	25 ASTM C661
Water Resistant:	Yes	Joint Movement:	± 25% ASTM C719
Paintable:	Yes, after sealant is fully cured with latex paint or primer	Tensile Strength:	~100 psi ASTM D412 (21 days cure)
Nail-Hole Filling:	DO NOT use as a nail hole filler or in touch-up applications on prefinished building materials. Follow prefinished cladding manufacturer's instructions for nail hole filling.		
180° Peel Adhesion:	ASTM C794	Maximum Elongation:	550% ASTM D412 Die C
PVC Trim:	12.9 lb./in	Specifications:	Meets the performance requirements of:
Fiber Cement:	19.8 lb./in		• ASTM C920: Type S, Grade NS, Class 25, Use NT
Coated (Painted) Aluminum:	12.8 lb./in		• Federal Spec. TT-S-00230C, Type II
Vinyl Siding:	11.5 lb./in		
Mortar:	17.9 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: Do not use inside occupied structures. Wear gloves and wash hands after use.

Surface Preparation: All surfaces should be clean, dry, and free of all old caulking, grease, dust, frost, ice, snow, surface water and other contaminants, or materials 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. Ensure all cut ends of wood or fiber cement siding are properly sealed with primer or paint. The combination of trapped moisture and other variables will tend to create back pressure and cause sealant bubbling regardless of technology. While QUAD 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 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.

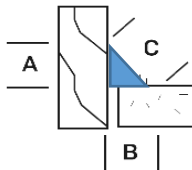
Wood and painted wood: New and weathered wood must be clean and structurally sound. Cut back weathered surfaces and dry rot until clean, sound wood is reached. Scrape away paint to bare wood. Any coating that cannot be removed must be tested to verify adhesion of the sealant. QUAD will adhere to most 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 depth of the sealant joint should be one-half the width of the joint. The maximum depth is 1/2 inch (13 mm) and the minimum is 1/4" (6 mm). The minimum recommended joint width is 1/4" inch and the maximum recommended joint width is 3/8" inches (10 mm). See table below.

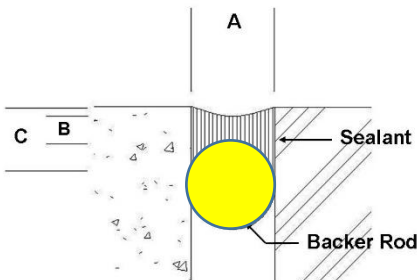
Joint Width (inches)	Sealant Depth @ Midpoint (inches)
1/4	1/4
1/2	1/4
3/8	1/2

Joint Width (mm)	Sealant Depth @ Midpoint (mm)
6	6
13	6
10	13



Fillet Joint Design

- Dimension A and B must be a minimum of 1/4"
- Dimension C must be a minimum of 3/8"



Dynamic Joint Design

- Dimension A can be a minimum of 1/4" but not greater 3/8" wide
- Dimension B must a minimum of 1/4" in depth
- Dimension C can be a maximum depth of 1/2"

NOTE: Tooling is not necessary or recommended. DO NOT bridge the sealant or smear beyond the joint edges otherwise it may result in premature color fading on prefinished siding and trim materials. Sealant will form to a concave appearance when cured.

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 is recommended. Where the joint depth does not permit the use of backer-rod, a bond breaker (polyethylene strip) is recommended 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. Do not prime or puncture the backer-rod as this may cause bubbling of the sealant to occur.

General Preparation: The temperature of the product, the surfaces and the working area should be between 20°F (-7°C) and 100°F (38°C). However, for best overall performance surface temperatures and ambient temperatures should be between 40°F and 70°F. It is recommended to store cartridge at room temperature at least 24 hours before use during extreme cold weather conditions. 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.



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DIRECTIONS

Application: Insert cartridge into caulking gun, apply moderate pressure in order to break the Break-A-Way Seal™ inside the nozzle. Cut the tip off the cartridge at a 45° angle to desired bead size (3/8" size bead is recommended). Apply sealant between 20°F (-7°C) and 100°F (38°C).

Apply sealant with steady pressure, forcing the sealant into the joint making sure the sealant "wets" the side surfaces of the joint. If the depth of the joint exceeds 3/8" (9.5 mm) the use of a backer rod is recommended. OSI QUAD will not pop or splatter and will dispense smoothly on extrusion from the cartridge. Tooling of the sealant is not necessary or recommended. Always apply sealant in a bead form. Do not tool, feather or smear 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.

In general, the ideal conditions for using sealants in exterior applications are during spring and fall seasons when outside temperatures are moderate. Maximum performance is achieved when adjoining substrates are at their equilibrium in terms of expansion/ contraction characteristics. Applying sealants when substrates are maximum expansion or contraction places extreme strain on the sealants ability to maintain a proper seal at all times during extreme weather changes.

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 sealant after applying. The sealant when applied properly will cure to a concave look. Do not smear or feather sealant on prefinished colored cladding materials (i.e. siding, trim) as this will reduce any sealants ability to withstand UV exposure and joint movement, causing premature joint failure and color fading. 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 on prefinished siding and trim materials. Doing so can result in premature color fading and an unsightly appearance. Follow prefinished cladding manufacturer's instructions for nail hole filling.

BUTT / FIELD JOINT APPLICATIONS: Not recommended for field joint/butt joint applications on pre-finished siding and trim materials. Sealant is not recommended for joints less than 1/4" wide and 1/4" in depth. 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. Joints smaller than 1/4" will become "maintenance" situations that need to be inspected regularly for premature failure. 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 claddings (i.e. siding and trim) please refer to manufacturer's instructions for proper installation.

CONTROL JOINT APPLICATIONS: Maximum joint width should not exceed 3/8". For control joints apply sealant without tooling. During the curing time the sealant will form a concave shape (see Fig. 2) due to material shrinkage. Tooling is not recommended or necessary. Care must be taken to NOT allow or 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. Commercial applications may require a different type of sealant to be used

PAINTABILITY: Sealant is paintable when fully cured. Full cure may take 7-14 days or longer depending on ambient conditions and volume of sealant used. Latex paint is recommended. If using oil based/alkyd paint, a latex primer should be used first. It is the responsibility of the applicator to conduct on-site testing to determine compatibility and adhesion. It is always recommended to use a color matched sealant where available. (**NOTE:** Paints are more rigid than sealants and may crack, wrinkle or lose adhesion during sealant movement in extreme conditions). Visit OSITough.com for a complete color match listing.

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 and may damage the surface. **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.

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.



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LABEL PRECAUTIONS

WARNING! HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE EYE, SKIN AND RESPIRATORY IRRITATION.

WARNING! Contains petroleum distillates, xylene and crystalline silica. Use in a well-ventilated area. Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation. Avoid breathing vapors. Avoid contact with eyes and skin. Prolonged or repeated exposure may affect the nervous system causing dizziness, headache or nausea. If you experience eye watering, headache or dizziness, leave the area to obtain fresh air. Do not swallow. **FIRST AID:** If swallowed do not induce vomiting, call a physician or Poison Control center immediately. For eye contact flush with water for 15 minutes, call a physician. For skin contact wash thoroughly with soap and water. If overcome by vapors, get fresh air. **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.

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage or may cause cardiac arrhythmia. **INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL**



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.

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.



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



OSI Brand is part of the Henkel family of brands. Founded in 1876, Henkel is a global leader in the consumer and industrial businesses. Henkel operates worldwide with leading brands and technologies in three business areas: Laundry & Home Care, Beauty Care and Adhesive Technologies.

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