



# TECHNICAL DATA SHEET

## WINDOW & DOOR INSTALLATION FOAM



**Description:** OSI QUAD Foam Gun or Straw is a single component, minimal expansion, low pressure polyurethane foam designed for Window and Door installations. It is packaged in a pressurized can, with a unique adaptor that allows both gun and straw application. Use with the straw is great for small jobs that require a single can, and offers improved structure versus traditional straw foams. For larger jobs and heavy users, gun application is recommended, due to the ergonomic design of the gun, the ability to use the full can by re-sealing it for later use, and precision control to adjust the bead size.

OSI QUAD Foam exhibits slight to moderate expansion during application and cures upon reaction with moisture to form a flexible, urethane foam. The closed cell structure of this material provides an R factor of 5 per inch of cured foam making it an efficient method for stopping air and moisture infiltration and expensive warm and cold air loss between windows and rough frame. It will not warp or deform windows and doors. OSI QUAD Foam Gun or Straw adheres to all types of building materials including wood, concrete, and drywall and is compatible with asphalt and butyl flexible flashing. It complies with all Federal and State VOC regulations.

### Available As:

Item #	Size	Color
1927125	16 fl oz (453g)	Tan

### Features & Benefits:

- Low Foam Pressure/Low Expansion – will not warp or deform windows and doors
- Convenient Gun or Straw Application
- Quick Setting Formulation – can be cut or trimmed in less than 1 hour
- Cold Temperature Application (14°F)
- Insulation Value of R5/inch
- Closed Cell Structure Does Not Absorb Moisture
- Flexible/Will Not Crack or Dry Out

### Recommended For:

OSI QUAD Foam Gun or Straw is part of the OSI QUAD Window & Door System and is used to insulate and seal around windows and door frames. It can also be used for jambs, mud sills, header joints, corner joints, top plate penetrations, electrical and plumbing penetrations and other areas where air infiltration or heat loss may occur. Bonds most building materials including vinyl, aluminum, fiberglass, wood, OSB, PVC, concrete and metal.

### For Best Results:

- OSI QUAD Foam Gun or Straw is not a fire stopping material and SHOULD NOT be used in areas that require fireproof or fire stopping materials
- Urethane foams are adversely affected by sunlight (UV light). Exposed foam must be coated with a protective covering or coating
- Do not store product on its side
- Does not bond to polyethylene, polytetrafluoroethylene (PTFE)/Teflon® or siliconized surfaces
- For cold weather applications, product should be stored above 41°F (5° C) at least 12 hours before application

### Coverage:

Total Yield per can:

- Gun: Maximum of 25 L
- Straw: Maximum of 19 L

Total Yield for a cured foam bead of 12.7 mm (1/2") diameter:

- Gun: 646 ft (197 m)
- Straw 489 ft (149 m)

Note: Yields shown are based on theoretical calculations, for comparison purposes, and will vary depending on ambient conditions and particular application



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## Typical Uncured Physical Properties:

Color:	Tan	
Appearance:	Minimal expansion foam	
Base:	Single component polyurethane	
Odor:	Ether-like	
Specific Gravity:	1.107	
Flash Point:	< 0°F (-18°C)	
% Solids by Weight:	70%	
VOC Content:	16% by weight	CARB
	177 g/l	SCAQMD rule 1168
Shelf Life:	12 months from date of manufacture (unopened)	
Lot Code Explanation:	<b>DD/MM/YYYY</b> (bottom of canister) <b>DD/MM/YY</b> (on box) <b>DD</b> = Day of manufacture <b>MM</b> = Month of manufacture <b>YYYY (or YY)</b> = Year of manufacture Example: 28/10/2014 or 28/10/14= October 28, 2014	

## Typical Application Properties:

Application Temperature:	Product should be stored between 41°F (5°C) and 77°F (25°C) at least 12 hours before application. For best results, store at room temperature. During application, working environment and substrates should be between 14°F (-10°C) and 86°F (30°C).	
Tack-Free Time:	Approx. 8 to 10 minutes*	At 73°F, 50% relative humidity
Cut Time:	Gun: Approx. 25-35 minutes* Straw: Approx. 70 minutes*	
Cure Time:	Approx. 24 hours* *Time is dependent on temperature, humidity and depth of sealant applied	

## Typical Cured Performance Properties:

Color:	Tan	
Service Temperature:	-40°F (-40°C) to 194°F (90°C) -40°F (-40°C) to 248°F (120°C)	Long-term exposure Short-term exposure
Surface Burning Characteristics:	ASTM E84	
Flame Spread :	10	
Smoke Development:	25	
Pressure Test for Polyurethane Foam:	AAMA 812	
Pressure Build-Up:	Gun: 0.2471 psi Straw: 0.6236 psi	
Calculated Beam Deflection:	Gun: 0.0050 inches Straw: 0.0125 inches	
Specifications:	<ul style="list-style-type: none"><li>GreenGuard Certified for Children and Schools</li><li>Tested in accordance with AAMA 504 Voluntary Laboratory</li><li>Test Method to qualify Fenestration Installation Procedures</li><li>**Conforms to ASTM E2112 Standard Practice for Installation of Exterior Windows, Doors and Skylights, Annex A1, Type A – Low Pressure Foam Sealant</li></ul>	



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\*\*The OSI QUAD Window & Door System uses similar practices and principle as ASTM E2112 Standard Practice for Installation of Exterior Windows, Doors and Skylights. ASTM E2112 is intended to provide technical guidance to organizations that are developing training programs for installers of fenestration units. The majority of fenestration units and materials used to install them are certified as meeting specified performance characteristics. The OSI QUAD Window & Door System products have been tested in accordance with the relevant specifications required for performance under both ASTM and AAMA guidelines. The specifications for each product are listed on each components individual technical data sheet.

## Directions:

### Tools Typically Required:

Painter's tape for protecting surfaces and utility knife. For gun application: OSI Foam Gun (IDH #1413066) and OSI Foam Clean (IDH # 1427512).

### Safety Precautions:

Always wear eye protection, gloves and proper work clothes when using OSI QUAD Foam Gun or Straw. Wash hands after use. Cured foam is difficult to remove from skin, clothing and other substrates. It may discolor skin.

### Preparation:

Read all operating instructions packaged with the dispensing unit before using. All surfaces must be free of dust, dirt, oil and other foreign materials. Cover surfaces not intended to be foamed as cured foam is difficult to remove. The temperature of the product should be kept between 41°F (5°C) and 77°F (25°C). For best results, store can at room temperature for at least 12 hours before application (see storage below). Under these conditions, the product can be applied when the surfaces and working area are between 14°F and 86°F (-10°C to 30°C).

### Gun Application:

Screw applicator onto coupling unit until it will go no further. Do not over tighten. Shake can well before use (minimum of 15 times). Adjust bead size with the gun regulator screw. When working with the gun, always keep the can upside down. Using the OSI Foam Gun, perimeter seal around window, doors and rough openings. Fill the gap to approximately 30%. Repeat shaking regularly during application. Foam is tack-free in 8 - 10 minutes\* and fully cured in approximately 24 hour\*. If necessary, any excess cured foam can be trimmed with a sharp knife or sanded, usually after approximately 1 hour\*. Cured foam exposed to prolonged sunlight must be covered with exterior grade paint, stain or sealant.

### Straw Application:

Shake can vigorously before use (15-20 times). Screw the straw applicator into the valve cavity. Do not over tighten. Dosage of the product can be adjusted by pressing the trigger. Using the straw applicator, perimeter seal around window, doors and rough openings. Fill the gap to approximately 30%. If there are pauses longer than 30 minutes during working, the nozzle and valve should be cleaned using acetone or a foam cleaner. Foam is tack-free in 8 - 10 minutes\* and fully cured in approximately 24 hour\*. If necessary, any excess cured foam can be trimmed with a sharp knife or sanded, usually after approximately 1 hour\*. Cured foam exposed to prolonged sunlight must be covered with exterior grade paint, stain or sealant.

Straw folds and plugs (see photo below for location of plug) for short-term storage and re-use. Clean straw with OSI Foam Clean or by soaking in a shallow pan of acetone.



### Notes:

- Insufficient air, humidity and/or substrate moisture during application may cause delayed curing or improper cell formation of the foam material. Lightly spraying the cavities with a water atomizer in dry or low humidity climates will allow the foam to cure and develop proper cell structure.
- If possible, avoid direct sunshine to the joint during application. Direct sunshine and high temperatures may cause the foam to sag and flow out of the joint during application and before curing. Cooling the can down prior to application may help to prevent this issue.

### Clean-up:

Clean tools and uncured product residue immediately with OSI Foam Clean. Cured foam is not affected by solvents and is extremely difficult to remove. When using gun, it is not recommended to remove the can before it is totally empty.



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## Storage & Disposal:

Product must be stored vertically, not horizontally on its side. Note: When storing foam dispensing applicators with foam cans attached, be sure to store the tool with the can valve pointing downwards. Storing the can upright may cause propellant to leak and the foam applicator to become inoperative.

Store in a cool, dry place. For maximum performance and shelf life, store between 41°F (5°C) and 77°F (25°C). The product can be stored for a maximum of 1 week at -4°F (-20°C). Do not store below -4°F (-20°C), below this temperature product valve may spontaneously open resulting in leakage.

Containers are under pressure. Do not expose to open flame or temperatures above 120°F (49°C). Do not store under direct sunlight. Excessive heat can cause bursting and premature aging of components resulting in shorter shelf life. When containers are empty, vent off any excess pressure. DO NOT discard empty can in garbage compactor. DO NOT incinerate. DO NOT puncture, cut or weld container.

**If the container is free of propellant, this product is not regulated as hazardous waste per 40 CFR 261.20-24**

**For disposal of unused product please see information below:**

**Recommended method of disposal for unused product:** Dispose of according to Federal, State and local governmental regulations.

**Hazardous waste number:** It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

## Label Precautions:

**DANGER! EXTREMELY FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. VAPOR AND SPRAY MIST HARMFUL, OVEREXPOSURE MAY CAUSE LUNG DAMAGE. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION, EFFECTS MAY BE PERMANENT. CONTENTS UNDER PRESSURE.**

**DANGER!** Contains modified polymeric MDI (proprietary), diphenylmethandiisocyanate (9016-87-9), tris(2-chloroisopropyl) phosphate (13674-84-5), dimethylether (115-10-6) and hydrocarbon propellant mixture **EXTREMELY FLAMMABLE**. Do not use near sparks, heat or open flame. Vapors will accumulate readily and may ignite explosively. Ventilate area during use and until all vapors are gone. **DO NOT SMOKE**. Extinguish all ignition sources. If burned, dried foam may release hazardous decomposition products. Dried foam may be combustible if exposed to flame or temperatures above 240°F. **CONTENTS UNDER PRESSURE**. Avoid prolonged exposure to sunlight or heat from radiators, stoves, hot water and other heat sources that may cause bursting. Do not puncture, incinerate, burn or store above 120°F. Do not discard empty can in garbage compactor. **VAPOR AND SPRAY MIST HARMFUL**. Gives off harmful vapor of solvents and isocyanates. Do not use if you have chronic lung or breathing problems, or if you have ever had a reaction to isocyanates. Use only with adequate ventilation. Where overspray is present, wear appropriate respiratory protection. If you have breathing problems during use, leave the area and get fresh air. If problems linger or occur later, call a doctor or obtain emergency medical treatment; have this label with you. **EYE AND SKIN IRRITANT**. Avoid contact with eyes and skin. Prolonged or repeated skin contact may lead to sensitization and dermatitis. Wash hands after using. Do not take internally. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**FIRST AID:** For eye contact, flush with water for 15 minutes. Call a physician if irritation develops and persists. For skin contact, wipe off excess uncured foam with clean rag or paper towel immediately. Get medical attention if irritation develops and persists. If affected by inhalation, remove to fresh air and contact a physician. If swallowed, do not induce vomiting. Call a physician or Poison Control Center immediately. For professional use only. **KEEP OUT OF REACH OF CHILDREN.**

**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.

## 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. Purchasers should test the products to determine acceptable quality and suitability for their own intended use. 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 everyday 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.

1-800-624-7767 – Mon-Fri - 9:00a – 4:00p ET

[www.ositough.com](http://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.

Henkel Corporation - Professional & Consumer Adhesives Headquarters - Rocky Hill, CT 06067

[www.henkelna.com](http://www.henkelna.com)

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