



# TECHNICAL DATA SHEET

Revision: January 7, 2022  
Supersedes: October 9, 2014  
Ref. #: 470516

## SUBFLOOR ADHESIVE

# SF450 HEAVY DUTY

THE TRUE  
ALL WEATHER



## DESCRIPTION

OSI® SF450™ Heavy Duty Subfloor Adhesive provides a strong bond and is formulated for interior or exterior subfloor construction. Its cold weather formula offers easier extrusion and strong adhesion in all weather conditions. OSI SF450 Heavy Duty bonds to most building materials to provide reliable performance. Its low VOC formulation meets stringent State and Federal VOC regulations.

### Available as:

Item #	Package	Size
1596529	Paper Cartridge	28 fl. oz. (828 ml)

## FEATURES & BENEFITS

- True All-Weather Subfloor Adhesive
- Cold Weather Applications
- Bridges Minor Gaps in Framing
- Helps Reduce Squeaky Floors
- Strong Adhesion to Most Building Materials

## RECOMMENDED FOR

OSI SF450 Heavy Duty can be used in most interior and exterior construction projects either on the job or the production line. It bonds most wood-to-wood assemblies. It is primarily designed for on-site bonding of subfloor and plywood decking to wood joists. OSI SF450 Heavy Duty is suitable for use on plaster, metal, masonry, concrete, wood, brick, ceramic tile, slate, treated lumber\* and most other projects requiring an adhesive.

## LIMITATIONS

- Strict adherence to installation instructions must be followed when used with glued floor systems
- Not recommended for vinyl plank flooring materials or other composite flooring materials
- Not for use on polyethylene (PE), polypropylene (PP), polytetrafluoroethylene (PTFE) and acrylic plastics
- Not recommended for use on unlined expanded or extruded polystyrene plastic foams
- Not suitable for permanent water immersion or areas of constant moisture exposure
- Not suitable for applications requiring temperature resistance greater than 120°F or below -20°F
- Not for use on mirrors or tub and shower surrounds
- Not recommended for bonding two non-porous surfaces
- \*Test adhesion to treated wood before starting project. Treatments vary widely and can adversely impact adhesive bond and performance

## COVERAGE

### For a 28 fl. oz. (828 ml) cartridge:

- A 1/4" (6 mm) bead extrudes approximately 86 ft. (26 m)
- A 3/8" (9.5 mm) bead extrudes approximately 38 ft. (12m)



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## TECHNICAL DATA

Typical Uncured Physical Properties		Typical Application Properties	
<u>Color:</u>	Light Tan	<u>Application Temperature:</u>	Apply between 0°F (-18°C) and 100°F (38°C) for optimal performance For best results, store adhesive at 73°F (23°C) 24 hours before use
<u>Appearance:</u>	Thick paste	<u>Odor:</u>	Acetone
<u>Base:</u>	Synthetic rubber and resins Formaldehyde free	<u>Working Time:</u>	15 minutes* at 78°F (25°C) and 50% RH
<u>Viscosity:</u>	375,000 cps	<u>Extrusion Force:</u>	Approx. 60 lbs. at 73°F (23°C)
<u>Specific Gravity:</u>	1.39	<u>Vertical Sag:</u>	0.125 inches                      ASTM C639
<u>Flashpoint:</u>	1.4°F (-17°C)	<u>Cure Time**:</u>	2 – 7 days* at 78°F (25°C) and 50% RH *Time is dependent upon temperature, humidity, porosity of substrate and amount of adhesive used
<u>% Solids by Weight:</u>	80%	<u>Clean Up:</u>	Clean up uncured adhesive residue with mineral spirits. Scrape away cured adhesive using a sharp-edged tool.
<u>VOC Content:</u>	0.25% by weight (CARB) 7.5 g/L (SCAQMD)		
<u>Shelf Life:</u>	18 months from date of manufacture (unopened)		
<u>Lot Code Explanation:</u>	YYDDD  YY = Last Two Digits of Year of Manufacture DDD = Day of Manufacture based on 365 days per year <b>For example:</b> 19061 = March 2, 2019		

\* Time is dependent upon temperature, humidity, porosity of substrate and amount of adhesive used

\*\* Cure time is significantly increased in cold temperatures and/or low humidity conditions

## Typical Cured Performance Properties

<u>Color:</u>	Light Tan	<u>Service Temperature:</u>	-20°F (-29°C) to 120°F (49°C)
<u>Cured Form:</u>	Non-flammable solid	<u>Water Resistant:</u>	Yes
<b><u>Shear Strength ASTM D3498:</u></b>		<b><u>Specifications:</u></b>	
Wet Lumber:	295 psi	Meets and exceeds the following specifications	
Frozen Lumber:	165 psi	• American Plywood Association (APA) AFG-01	
Dry Lumber:	246 psi	• ASTM D3498-93	
Gap Filling:	248 psi	• HUD UM No.60a	
Moisture Resistance:	152 psi No delamination		

## DIRECTIONS

### Tools Typically Required:

Utility knife, caulking gun, and tool to puncture cartridge seal. For best application results, OSI® recommends the use of a high-quality caulking gun such as the Albion® B12 and B12Q Cartridge Guns

### Safety Precautions:

Interior applications require ventilation to the outside during application and cure. Wear gloves to avoid skin contact. Wash hands after use.



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## DIRECTIONS

### Preparation:

The temperature of the adhesive, surfaces and the working area must be between 0°F (-18°C) and 100°F (38°C). For smooth, fast, easy application during cold weather, store adhesive at room temperature (70° ± 5°F) 24 hours prior to use. Ensure surfaces to be bonded are clean, structurally sound and free of standing water, snow, ice, dust, grease, oil or other contaminants. To increase adhesion, sand glossy surfaces to a dull finish. Pre-fit all materials prior to applying product. Cut off tip of cartridge at 45° angle to desired bead size. Cut another 45° angle opposite the first cut. This will allow for applying a round bead of adhesive. For exterior applications and all subfloor applications the recommended bead size is 3/8" (9.5mm) round. Puncture seal inside of nozzle.

### General Application:

Pre-cut and fit materials before applying adhesive. Using a caulking gun, apply adhesive in a continuous bead to joists, studs or back side of siding or panels, whichever is appropriate. Make sure that all outer edges and centers are adequately supplied with adhesive to ensure a complete and total bond. All materials should be glued together within 15 minutes after adhesive application. If work is delayed, remove applied adhesive and begin again. Use nails sparingly for support and as an aid to alignment during installation. Working time is approximately 15 minutes. Cure time is dependent upon temperature, humidity, porosity of substrate and amount of adhesive used. Low temperature and humidity will slow cure time. User is responsible for determining suitable and acceptable results for their intended project. Test before use. After use, wipe off nozzle tip and recap immediately.

### Subfloor Installations:

**Strict adherence to adhesive and flooring manufacturer installation instructions must be followed when used with moisture resistant premium engineered flooring panels, particularly when combined with web truss systems.**

Apply a continuous line of adhesive (3/8" round bead) to joists/framing members, or a serpentine pattern to wide areas such as 2x4 top cords laid flat with "open web trusses". For tongue and groove panels, apply a continuous line of adhesive (1/4" thick) to groove avoiding excess "squeeze out". Each panel must be positioned in place (avoid sliding or smearing the adhesive) and fastened within 15 minutes of applying adhesive to ensure maximum bond before proceeding to the next step. (Note: if work is delayed, remove applied adhesive, and begin again.) Follow proper gapping and fastening methods as designated by the APA Nailed-Glued Fastening Schedule (Table 14) published in the APA Engineered Wood Construction Guide, Form No. E30W. (**Special note:** screws are recommended for installing subfloors to any web truss system)

### Clean-up:

Clean tools and uncured adhesive residue immediately with mineral spirits or paint thinner in a well-ventilated area to the outdoors. Cured adhesive may be carefully cut away with a sharp-edged tool or other mechanical means.

## STORAGE & DISPOSAL

**NOT DAMAGED BY FREEZING.** For best results, store product at 70°F ± 5°F and <50% relative humidity. Store away from heat, flame and sparks. Take unwanted product to an approved hazardous waste facility. Hardened material may be disposed of with household trash.

## LABEL PRECAUTIONS

**DANGER! EXTREMELY FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE EYE, SKIN AND RESPIRATORY IRRITATION.**

**DANGER!** Contains acetone, methyl acetate, and crystalline silica. **EXTREMELY FLAMMABLE.** Vapors may ignite explosively. Do not use or store near heat, sparks or open flame. Do not smoke when using this product. Extinguish all flames and pilot lights and turn off all sources of ignition, including stoves, heaters and electric motors during use and until all vapors are gone. Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation. Use in a well-ventilated area. 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 take internally. **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 THE REACH OF CHILDREN.**



**WARNING: Cancer and Reproductive Harm – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**

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



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## 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 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. For warranty assistance, contact Henkel at 1.800.624.7767 M-F 9:00 am to 4:00 pm ET.



**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 9:00am – 4:00pm ET  
[www.ositough.com](http://www.ositough.com)



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