



# TECHNICAL DATA SHEET

**OSI**  
Professional Grade  
Adhesives & Sealants

**SF-450™**  
Heavy-Duty Construction &  
Sub Floor Adhesive

**Henkel Corporation**  
Professional and Consumer Adhesives  
Rocky Hill, CT  
Phone 1-800-624-7767  
Fax (440) 250-7873  
[www.henkel.com](http://www.henkel.com) [www.osipro.com](http://www.osipro.com)



## DESCRIPTION

OSI® SF-450™ Heavy Duty Construction & Sub Floor Adhesive is a Solvent-based, Low VOC formula specifically designed for use installing sub floors in residential applications. The True All-Weather Sub floor Adhesive, SF-450™ is formulated for use at temperatures as low as 0°F and has an upper operating range of 100°F. Easy gunning at all temperatures, SF-450™ will not roll-up on wet, frozen and treated lumber. Meets ASTM D 3498 standards.

## RECOMMENDED FOR:

SF-450™ can be used in most interior and exterior construction projects either on the job or the production line. It bonds all wood to wood assemblies dry, wet or frozen. Primarily designed for on-site bonding of sub-floor and plywood decking to joists during cold weather. SF-450™ is suitable for use in drywall, plaster, metal, masonry, concrete, brick, ceramic tile, slate, treated lumber and most other projects requiring an adhesive. Ideal for use in prefab or modular construction.

## NOT RECOMMENDED FOR:

- Polyethylene (PE), polypropylene (PP), polytetrafluoroethylene (PTFE) and acrylic
- Unlined expanded or extruded polystyrene plastic foams
- Permanent water immersion
- Applications requiring temperature resistance greater than 150°F or below -20°F
- Mirrors, tub and shower surrounds

## FEATURES & BENEFITS:

Feature	Benefits
The True All-Weather Subfloor Adhesive.....	Use in temperatures from 0°F to 100°F
Waterproof and Weather Resistant.....	Great for indoor or outdoor projects
Cold weather gunnable.....	Eliminates "roll-up" on frozen lumber
Meets and exceeds APA AFG-01 specs.....	Can be applied directly to dry, wet or frozen lumber
Bonds to most building materials.....	Provides a strong, durable bond to multiple surfaces
Gap filling.....	Will bridge minor gaps when bonding irregular surfaces; Reduces squeaking and splitting
High Grab.....	Reduces the use of fasteners

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

## COVERAGE

For a 28 fl. oz. (828 mL) cartridge:  
A 1/4" (6 mm) bead extrudes approximately 85.8 ft (26.1 m).  
A 3/8" (9.5 mm) bead extrudes approximately 38.1 ft (11.6 m).

## DIRECTIONS

### Tools Typically Required:

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

### Safety Precautions:

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

### Preparation:

The temperature of the adhesive, the 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, dry, structurally sound and free of 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. For exterior applications, the recommended bead size is 3/8" (9.5 mm). Puncture seal inside of nozzle.

### Application:

Using a caulking gun, apply adhesive in a continuous bead to joists, studs or back side of siding or panels, whichever is appropriate. Ensure that all outer edges and centers are adequately supplied with adhesive to ensure a complete and total bond. Use nails sparingly for support and as an aid to alignment during installation. Repositioning time is approximately 15 minutes. After use, wipe off nozzle tip and recap immediately.

### General Construction Use:

Pre-cut and fit materials before applying adhesive. All materials should be glued together within 15 minutes after adhesive application. If work is delayed, remove excess adhesive and begin again.

### Sub-Floor and Decking:

Apply continuous beads (1/4" to 3/8") of adhesive to all floor joists. For tongue and groove panels, apply 1/4" beads to groove avoiding excess "squeeze out". Position panels allowing 1/8" gap for expansion at butt joints and nail within 10 minutes after adhesive application. Use proper nailing method as designated by APA Adhesive Nail-On Schedule.

### Pre-Finished Panels:

Apply continuous beads of adhesive to studs or furring strips. For wall surfaces, prepare surface accordingly and apply continuous parallel beads 12-16 inches O.C. Position panel and press firmly in place. Use finishing nails or mechanical fasteners along top and bottom edges to hold panels in place. Temporary blocking of panels may be necessary until adhesive sets.

### Drywall:

Apply adhesive in same manner as for paneling. Permanent mechanical fasteners are required 16 inches O.C. around perimeter of panels. Field fasteners may be required if gypsum board shows evidence of warping. Note: Field fasteners are required 24 inch O.C. for all ceiling applications in addition to perimeter fasteners when using adhesives.

### 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.

## STORAGE AND DISPOSAL

Not damaged by freezing. For best results, store at 70° ± 5°F in a cool, dry place. Store away from heat, flame and sparks. Take unwanted product to an approved household hazardous waste transfer facility. Hardened material may be disposed of with trash.

## LABEL PRECAUTIONS

Contains acetone and methyl acetate. **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.**

Refer to the Material Safety Data Sheet (MSDS) 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. 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.

## TECHNICAL DATA

Typical Uncured Physical Properties	Typical Application Properties
<u>Color:</u> Tan	<u>Application Temperature:</u> Apply and cure between 0°F (-18°C) and 100°F (38°C)
<u>Appearance:</u> Thick paste	<u>Repositioning Time:</u> 15 minutes
<u>Base:</u> Synthetic rubber and resins	<u>Full Cure Time:</u> 2 to 7 days Cure time depends upon temperature, humidity, porosity of substrate and amount of adhesive used.
<u>Odor:</u> Sweet, aromatic	
<u>Specific Gravity:</u> 1.44	
<u>Viscosity:</u> 210,000 cps	
<u>pH:</u> 7	
<u>Flash Point:</u> 1.4°F (-17°C)	
<u>VOC Content:</u> 5.2 g/L (0.3% by weight)	
<u>Shelf Life:</u> 24 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 in a year  (Lot code is stamped on bottom plunger of cartridge)  For example: 09061 = 61 <sup>st</sup> day of 2009 = March 2, 2009	

Typical Cured Performance Properties	
<u>Color:</u>	Tan
<u>Cured Form:</u>	Non-flammable solid
<u>Service Temperature:</u>	-20°F (-29°C) to 150°F (66°C)
<u>Water Resistance:</u>	Yes
<u>Shear Strength (ASTM D 3498 – 11.2):</u>	
Wet Lumber:	400 psi (Requirement = 150 psi)
Frozen Lumber:	300 psi (Requirement = 100 psi)
Dry Lumber:	400 psi (Requirement = 150 psi)
Gap Filling:	300 psi (Requirement = 100 psi)
<u>Specifications:</u>	Meets and exceeds the following specifications: <ul style="list-style-type: none"> <li>▪ American Plywood Association specifications AFG-01</li> <li>▪ ASTM D 3498-93</li> <li>▪ HUD UM 60A</li> </ul>

**Medical Conditions Aggravated by Exposure:**

Eye, skin, and respiratory conditions.

**Carcinogenicity:**

No ingredients are classified as a carcinogen by IARC, NTP or OSHA.

### EMERGENCY AND FIRST AID PROCEDURES

**Eyes:**

Flush with plenty of water. Contact a Physician if symptoms occur.

**Skin:**

Wash with soap and water.

**Inhalation:**

Move victim to fresh air. Call a Physician if symptoms occur.

**Ingestion:**

Seek medical attention. Do not induce vomiting unless directed by a Physician. Never give anything by mouth to an unconscious person.

**Other:**

Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

### CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

**Ventilation:**

General (natural or mechanically induced fresh air movements).

**Eye Protection:**

Safety glasses with side shields.

**Skin Protection:**

Impermeable gloves are recommended.

**Respiratory Protection:**

Not normally required. Where ventilation is inadequate to control vapors, use a NIOSH-approved respirator with organic vapor cartridges. Never enter a confined space without an appropriate air supplied respirator.

### PRECAUTIONS FOR SAFE HANDLING AND USE

**Handling and Storing Precautions:**

Store in a cool dry area. Keep from freezing. Shelf life is one year from date of manufacture if stored between 40° and 77° F (5 - 25° C). For industrial use only. Keep out of reach of children. Keep container sealed when not in use to prevent curing of the product. Avoid contact with the eyes and skin. Practice good hygiene; i.e. wash after using and before eating or smoking.

**Spill Procedures:**

Allow to cure and place in a container for proper disposal in accordance with all applicable local, state, or federal requirements. Not regulated as a hazardous waste according to federal EPA definitions.

### REGULATORY INFORMATION

**Hazard Communication:**

This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

**HMIS Codes:**

Health 1, Flammability 0, Reactivity 0, PPE B (Gloves, Glasses)

**DOT Shipping Name:**

Not regulated.

**IATA / ICAO Shipping Name:**

Not regulated.

**TSCA Inventory Status:**

Chemical components listed on TSCA inventory.

**SARA Title III, Section 313:**

This product contains approximately 3% ethylene glycol which is subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).

**EPA Waste Code(s):**

Not regulated by EPA as a hazardous waste.

**Waste Disposal Methods:**

Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

### CONTACTS

**Customer Service:**

1 800 879 8000

**Technical Service:**

1 800 879 8000

**Health / Safety:**

1 800 879 6000 Jerry Metcalf (x6704)

**Emergency # (Chem-Trec):**

1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.