



FOAMGLAS®

PC® 99 2K ADHESIVE

Description and Area of Application

PC® 99 2K adhesive is a two-part moisture-curing, polyether adhesive for bonding FOAMGLAS® insulation to itself or to other porous or nonporous substrates. PC® 99 2K adhesive is solvent-free and contains no isocyanates. PC® 99 2K adhesive will not shrink upon curing and will not discolor when exposed to UV light. PC® 99 2K adhesive is capable of joint movement in excess of 25% in both compression and extension.



Field Application

Always read and understand the information contained within product data sheets and safety data sheets before attempting to use this product. If you have questions regarding fitness of use of this product for an application, consult Owens Corning.

Substrate Preparation

Surfaces must be free of moisture, loose scale, and rust, dust, oil, and grease. Asphaltic primers, coal tars, silicones, alkyd, or other solvent-sensitive or thermoplastic primers or coatings should not be used. Some acceptable primers are zinc-rich, polyester, and epoxy. If in doubt, always check the surface for adhesion before starting work with a test piece. Apply a small insulation piece and let cure for a minimum of 24 hours. Insulation pieces should break before the adhesive peels from the surface.

Insulation pieces should be checked for fit to the substrate surface before the adhesive is mixed or work started. Insulation pieces must be reshaped or cut smaller if they do not fit.

Environmental Considerations

Temperature of the adhesive, substrate, and the ambient temperature will affect working time and cure. Higher temperatures reduce working time, viscosity, and cure. Lower temperatures increase viscosity and lengthen the working time and cure.

Mixing Guidelines

Mix the Component A bucket with a mixing blade until the material is uniform. Note: The surface of the material may have formed a skin, especially if the pail was previously opened. Remove the skinned material prior to mixing. This will not affect the performance of the PC® 99 2K adhesive. Add Component B to the bucket and continue to mix for five to seven minutes.

Move mixer around inside the pail for consistent blending. A 19-mm (3/4-inch) heavy-duty drill and a good mixing paddle are required. The recommended mixer paddle for PC® 99 2K adhesive is available from Owens Corning. DO NOT use ribbon-type mixing paddles or any type of mixing paddle that may entrain air into the adhesive mixture.

SEE SUPPLEMENTAL MIXING AND APPLICATION INSTRUCTIONS AT THE END OF THIS DOCUMENT.

Cellular Glass Application Guidelines

Blocks of insulation should be checked for fit to the substrate surface before application of the adhesive. Blocks must be reshaped or cut smaller if they do not fit, especially on overhead work. On curved or overhead surfaces, temporary support may be needed.

On below-ambient equipment, all joints must be completely sealed with adhesive and all voids must be completely filled as possible. Joints should be sealed and any excess adhesive wiped off the insulation surface before the adhesive sets. Adhesive on the face of the block may cause coating adhesion problems. If insulation is to be coated, blocks should be rubbed down to provide a uniform surface.

Apply adhesive with a notched trowel having a square notch of 6.4 mm (1/4 inch) deep, 3.2 mm (1/8 inch) wide with a 6.4 mm (1/4 inch) flat surface between notches, available from Owens Corning.

Additional coats of adhesive must be applied within eight hours to assure bonding to the previous coat. If adhesive has cured more than eight 8 hours, rub briskly with a commercial gloss remover or abrade before recoating.

Cleanup and Disposal

Allow the PC® 99 2K adhesive to cure. Then peel, scrape, or rub the cured adhesive off. Uncured product can be removed or cleaned using mineral spirits, acetone, or ethanol-based solvent.

Always dispose of excess adhesive and containers in accordance with local, state, and federal regulations.

Type of Delivery and Storage

- 13.2-liter (3.5-gallon) kit
- Gross weight: 19 kg (42 lb)
- Store original, unopened containers in a cool, dry area. Protect unopened containers from water, heat, and direct sunlight.
- Store adhesive out of direct sunlight and at temperatures as close to 25°C (77°F) as possible and for at least two hours before use.
- Consult Safety Data Sheet for additional storage and handling information.

Coverage

Standard application of adhesive to FOAMGLAS® insulation:

- One 13.2-liter (3.5-gallon) kit will cover ~7.7 m² (83 ft²).
- Standard application requires 1.71 L/m² (4.2 gal/100 ft²).
- Figures do not include losses.

Limitations

- Do not use in areas subject to continuous immersion.

Typical Properties

PROPERTY ¹	TEST METHOD	SI	ENGLISH	
Color		Natural		
Density		1.41 ± 0.02 kg/L	11.8 ± 0.2 lb/gal	
Solids Content		99.5 ± 0.5%		
Flash Point		Not Applicable		
Application Temperature ²				
Material		28 ± 7°C	82 ± 12°F	
Surface, Minimum		0°C	32°F	
Surface, Maximum		60°C	140°F	
Service Temperature ³				
Maximum, Intermittent		121°C	250°F	
Maximum, Continuous		60°C	140°F	
Minimum		-125°C	-193°F	
Elongation at Break	ASTM D412	290%		
Shear Strength	ASTM D1002	26.7 kg/cm ²	380 psi	
Shrinkage		No visible shrinkage after 14 days		
Working Time		60 minutes		
Cure Time/Full Setup		24 hours @ 24°C	24 hours @ 75°F	
Volatile Organic Content (VOC), Maximum Less Water and Exempt ⁴		20 g/L	0.17 lb/gal	
Water Vapor Permeability ⁵	ASTM E96 (Water Method) ASTM E96 (Desiccant Method) EN12086:1997	0.28 ng/Pa·s·m 0.16 ng/Pa·s·m 0.11 ng/Pa·s·m	0.19 perm-in 0.11 perm-in 0.08 perm-in	

1 Properties are subject to change. Consult Owens Corning.

2 Recommended material and surface application temperatures for ideal workability, product performance, and personnel safety. Please consult Owens Corning for applications outside these temperature ranges.

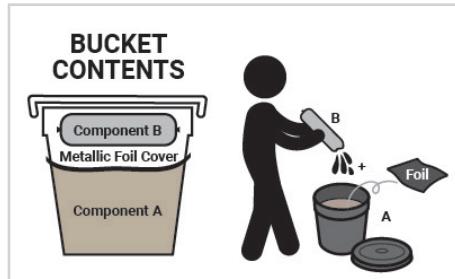
3 Service temperature limits are derived from laboratory evaluation of the product under conditions that simulate real world applications. Variations in substrates, loading conditions, or other external factors not explicitly covered by our guide specifications may further limit service temperature. Always follow appropriate the Owens Corning guide specifications, product datasheets and application instructions for suitability for use recommendations for specific applications.

4 Adhesive is certified to meet the general requirements for VOC emissions of SCAQMD Rule 1168, October 6, 2017, Adhesive and Sealant Applications, as analyzed by the methods specified in Rule 1168.

5 Material tested as a cured disk. When tested in a joint, permeability is too small to measure.

Adhesive is certified to meet stainless steel service requirements of MIL-I-24244, ASTM C795, and NRC Regulatory Guide 1.36.

Supplemental Mixing and Application Instructions



Step 1

Remove Component B catalyst from the top of the bucket. Peel away the metallic foil covering Component A. Carefully cut the tip from Component B and squeeze all of Component B on to Component A.



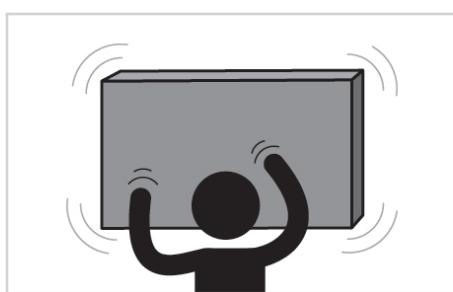
Step 2

Mix Components A and B for 5 to 7 minutes. A uniform color will indicate thorough mixing. Best results are achieved when a powered mixer and paddle are used to blend the components.



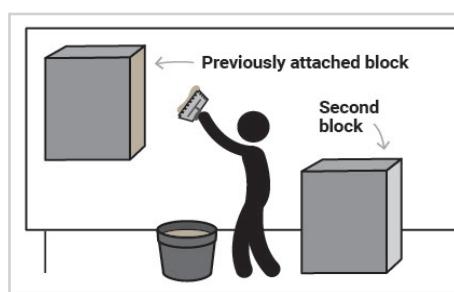
Step 3

Apply the adhesive to insulation with a notched trowel. Best results are achieved using a $\frac{1}{4}$ in. x $\frac{1}{8}$ in. x $\frac{1}{4}$ in. trowel.



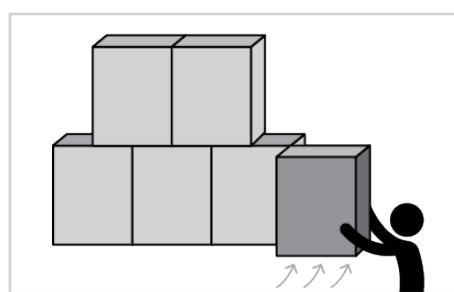
Step 4

Firmly press the insulation against the substrate to be insulated. Move the insulation around in a circular fashion to spread the adhesive and seat the insulation on the substrate.



Step 5

Apply the adhesive to the edge of the previously seated insulation block before preparing and seating the next insulation block. Apply adhesive to the edge of the next block and mount to the substrate as described in Step 4. Align and firmly press adjoining edges of adjacent blocks together to ensure the joints are sealed.



Step 6

Repeat until the substrate is insulated.

For additional information on FOAMGLAS® Insulation Systems, please visit us at www.foamglas.com.

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