PC® 99 2K ADHESIVE

Product Datasheet

1. 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.

2. Field Application

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

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 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 adhesive peels from surface.

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

Environmental Considerations

Temperature of 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. Store adhesive out of direct sunlight and at temperatures as close to 25 °C (77 °F) as possible and for at least 2 hours before use.

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 5 to 7 minutes until the color of the adhesive has become a uniform shade. A 19 mm (3/4 inch) heavy duty drill and good mixing paddle is required. The recommended mixer paddle for PC® 99 2K adhesive is available from Pittsburgh Corning LLC. 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 in.) deep, 3.2 mm (1/8 in.) wide with a 6.4 mm (1/4 in.) flat surface between notches available from Pittsburgh Corning LLC.

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

Clean up 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.

Dispose of excessive adhesive and containers in accordance with local, state and federal regulations.

3. Type of Delivery and Storage

- 13.2 L (3.5 gal) Kits – Gross Weight 19 kg (42 lb)
- Store original, unopened containers in a cool, dry area. Protect unopened containers from water, heat and direct sunlight.
- Consult Safety Datasheet for additional storage and handling information

4. Coverage

Standard application of adhesive to FOAMGLAS® insulation:

- 13.2 L (3.5 gal) kit: Covers approximately 7.7 m^2 (83 ft^2).
- Standard application requires 1.71 L / 1 m^2 (4.2 gal / 100 ft^2).

Figures do not include losses.

5. Typical Properties

PROPERTY [A]	METHOD	SI	ENGLISH
COLOR		Dark Green	
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			
MATERIAL		28 ± 7 °C	82 ± 12 °F
SURFACE (MINIMUM)		0 °C	32 °F
SERVICE TEMPERATURE[B]			
MAXIMUM, INTERMITTENT		121 °C	250 °F
MAXIMUM, CONTINUOUS		60 °C	140 °F
MINIMUM		-125 °C	-193 °F
TENSILE STRENGTH	ASTM D412	2.28 MPa	330 psi
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 SET-UP		24 hours @ 24° C (75° F)	
VOLATILE ORGANIC CONTENT (VOC), MAXIMUM LESS WATER AND EXEMPT[C]		20 g / L	0.17 lb / gal
WATER VAPOR PERMEABILITY[D]	ASTM E96 (Wet Cup)	0.28 ng / Pa·s·m	0.19 perm-in
	ASTM E96 (Dry Cup)	0.16 ng / Pa·s·m	0.11 perm-in
	EN12086:1997	0.11 ng / Pa·s·m	0.08 perm-in

[A] Properties subject to change. Consult Pittsburgh Corning LLC.

[B] Service temperature limits are derived from laboratory evaluation of the product. Variations in substrates, loading conditions, or other external factors may further limit service temperature. Always consult Pittsburgh Corning LLC FOAMGLAS® Insulation System Specification for suitability for use recommendations for a specific application.

[C] Adhesive is certified to meet the general requirements for VOC emissions of SCAQMD Rule 1168, July 1, 2005, Adhesive and Sealant Applications, as analyzed by the methods specified in Rule 1168.

[D] Material tested as cured disk.

Adhesive is certified to meet stainless steel service requirements of MIL-DTL -24244D (SH) and ASTM C795.

6. Limitations

- DO NOT use in areas subject to continuous immersion.

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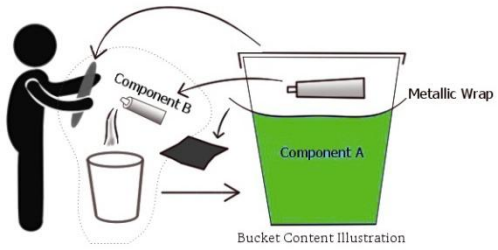
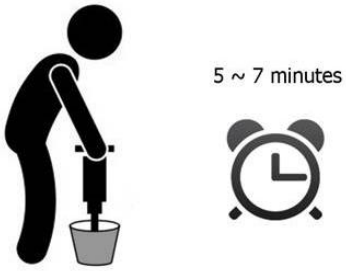
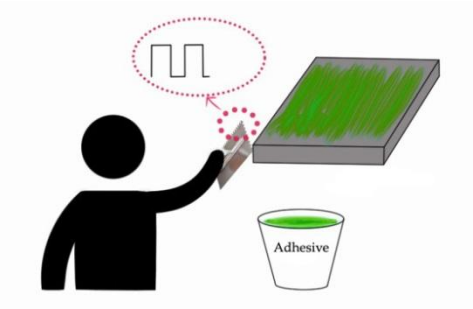
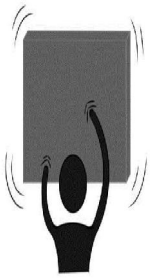
7. Supplemental Mixing and Application Instructions

STEP 1	STEP 2
Remove Component B catalyst from the top of the bucket. Peal away the metallic foil covering Component A. Carefully cut the tip from Component B and squeeze all of Component B on to Component A.	Mix Components A and B for 5 to 7 minutes. A uniform color will indicate throrough mixing. Best results are acheived when a powered mixer and paddle are used blend the components.
	
STEP 3	**STEP 4**
Apply the adhesive to a insulation with a notched trowel. Best results are achieved using 1/4 in. x 1/8 in. x 1/4 in. trowel.	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	**STEP 6**
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 in STEP 4. Align and firmly press adjoining edges of adjacent blocks together to ensure the joints are sealed.	Repeat until the substrate is insulated.