

Kao-Lok® Hardware for Blanket Wallpaper Systems

DESCRIPTION

Kao-Lok Anchors, Washers and Studs are a combination refractory and stainless steel designed to be used with Thermal Ceramics blanket wallpaper furnace linings. Kao-Lok Anchor Systems have been one of the preferred methods of installing ceramic fiber wallpaper lining systems for more than 30 years.

Kao-Lok Studs in lengths of 3½" (87.5mm) and longer have five notches which allow adjustment in compressing the blanket when installing the Kao-Lok Washer or the cone anchor. Stud lengths less than 3½" (87.5mm) have only two notches.

Kao-Lok Washers are designed so the washer allows for ease of handling. When properly installed, the washer will remain in place on roofs and in severe vibration applications.

Kao-Lok Ceramic Cone Anchors can be used in lengths of 1" and 2" (25mm and 50mm), with or without plug, to service temperatures up to 2300°F (1260°C). The Cone Anchor is made from a 50% Al₂O₃, 47% SiO composition. The void in the cone anchor is normally packed with Kaowool® Bulk or Kaowool Moldable. A 4" (100mm)-diameter washer with a 15/8" (40.6mm) I.D. hole with a stress relief slot is available for use with the cone anchors to cover a larger surface area to spread the weight and load of the insulation materials.

Kao-Lok Speed Clips are available in the following metals:

- mild steel
- 304SS
- 310SS
- 330SS
- Inconel 601

These 1½" (37mm) -square 26-gauge thick interference-fit washers are very useful when installing ceramic fiber linings using Kao-Lok Studs.

FEATURES

- Studs and washers available in 304SS, 310SS, 330SS, and Inconel 601 for use up to 2050°F (1121°C)
- Design of Kao-Lok anchor permits quick installation
- Ceramic cone anchor available as closure to increase use temperatures up to 2300°F (1260°C)

STANDARD SIZES

Kao-Lok Studs 1½" - 16" (37.5mm - 40.0mm), 1/8" x 1/4" (3.125mm x 6.25mm)

Kao-Lok Washers 1" x 1½" (25mm x 40.0mm), 16 gauge

Kao-Lok Speed Clips 1½" square (37.5mm), 26 gauge

Ceramic Cone Ancho 1" and 2" with plug (25mm and 50mm), 1" and 2" without plug (25mm and 50mm)

Ceramic Washer 4" diameter x 5/8" I.D. x 5/16" thick with 1/8" slot (100mm x 15.6mm x 7.8mm with 3.125mm)

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	304 SS	310 SS	330 SS	Inconel 601
Physical Properties				
Maximum Temperature Rating*	1200°F (649°C)	1800°F (982°C)	1950°F (1066°C)	2050°F (1121°C)
Chemical Analysis, %				
Carbon	0.08 max	0.25 max	0.20 max	0.10
Manganese	2.00 max	2.00 max	2.00 max	1.00
Silicon	1.00 max	1.50 max	1.00 max	0.50
Phosphorus	0.045 max	0.045 max	0.045 max	-
Sulphur	0.030 max	0.030 max	0.030 max	0.015 max
Chromium	18-20	24-26	15-17	23
Nickel	8-10	19-22	34-36	6-
Iron	Bal	Bal	Bal	bal

* These stated temperature service limits can be influenced by a number of conditions such as atmosphere and cycling. Consult your Thermal Ceramics sales representative or distributor for a specific alloy recommendation for your application.

Installation Information

Select a stud ½" to 1" (1.25cm to 2.5cm) longer than the thickness of the desired lining. Make certain to get adequate compression of the Kaowool Blanket before rotating the Kao-Lok Washer. This compression will prevent the washer from working loose in high vibration applications or overhead installations.

Kao-Lok Ceramic Cone Anchor Lining Thickness Range		
Kao-Lok Stud Length, in (cm)	1" (2.5cm) Series	2" (5cm) Series
3½ (8.75)	4 - 4½ (10 - 11.25)	4 - 5½ (10 - 13.75)
4½ (11.25)	5 - 5½ (12.5 - 13.75)	5 - 6½ (12.5 - 16.25)
6 (15)	6½ - 7 (16.25 - 17.5)	6½ - 8 (16.25 - 20)
8 (20)	8½ - 9 (21.25 - 22.5)	8½ - 10 (21.25 - 25)