

Data sheet

Kaowool® 333-E Paper

ENGLISH

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Description

Kaowool 333-E expandable paper is an intumescent material produced from a unique blend of Kaowool high-purity ceramic fibers, special additives, and organic binders in a special paper-making process. At maximum expansion which occurs at approximately 1200°F (649°C), the paper expands up to 400% of its thickness.

This results in the 333-E Paper being an excellent candidate for high temperature gaskets and seals. During heat up and expansion, there will be some additional out-gassing of the intumescent additives.

Like all the other high-quality Kaowool paper products, this specialty paper is noted for its excellent flexibility, outstanding handling characteristics, and high-insulating value.

Chemical Properties

A small amount of organic combustible binder will burn out at approximately 300°F (149°C). Caution should be exercised during the initial heating. Adequate ventilation should be provided to avoid potential flash ignition of the binder out-gassing or avoid air entry while at elevated temperature.

Type

Paper manufactured from high temperature insulation wool.

Classification temperature

(1260°C (2300°F))

The maximum continuous use temperature depends on the application. Unaffected by most chemicals except strong alkalis, phosphoric acid and molybdenum. For further advise please contact your local Morgan Advanced Materials representative.

Typical applications

- All-purpose high temperature gasketing and sealing
- Expansion joint insulation
- Fireplace catalytic converter gasketing
- Fire protection
- Industrial furnace seals
- Aluminum filter bowl gasketing

Benefits

- Low thermal conductivity and heat storage
- Easily die cut for high temperature gasketing and seals
- Thickness expansion up to 400%



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Kaowool® 333-E Papers

Paper Product Name	Kaowool 333-E Paper	
Fiber Class	RCF	
Physical Properties		
Manufacturing location	NA	
Color	white	
Continuous Use Temperature, °C (°F)	1149 (2100)	
Classification Temperature, °C (°F)	1260 (2300)	
Melting Temperature, °C (°F)	1760 (3200)	
Density, kg/m ³ (pcf)	240-288 (15-18)	
Tensile Strength, MPa (psi)	>0.28 (>40)	
Fired Tensile Strength, MPa (psi)	0.03 - 0.07 (5-10)	
Chemical Analysis, % weight basis after firing		
	Alumina, Al ₂ O ₃	42
	Silica, SiO ₂	48
	Carbon, C	5-10
	Organic binder	6-10
	Other	10
Expansion Characteristics		
Thickness, mm (in)	3 (1/8)	2 (1/16)
204°C (400°F)	86	132
540°C (1004°F)	419	385
1454°C (2650°F)	414	503
981°C (1798°F)	358	530

Availability and Packaging

North America packaging

Thickness, mm (in)	Width, mm (in)	Sq M/Roll (Sq Ft/Roll)	Mill Rolls, Linear M/Roll (Ft/Roll)
2 (1/16)	610, 1220 (24, 48)	46 (500)	229 (750)
3 (1/8)	610, 1220 (24, 48)	23 (250)	114 (375)
6 (1/4)	610, 1220 (24, 48)	12 (125)	56 (185)

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SUPERWOOL® is a patented technology for high temperature insulation wools which have been developed to have a low bio-persistence (information upon request). **SUPERWOOL®** products may be covered by one or more of the following patents, or their foreign equivalents:

SUPERWOOL® PLUS and **SUPERWOOL® HT** products are covered by patent numbers:
US5714421 and US7470641, US7651965, US7875566, EP1544177 and EP1725503 respectively.

A list of foreign patent numbers is available upon request to Morgan Advanced Materials plc.

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