



## TECHNICAL DATA SHEET CERAMIC GASKET

RAMI-SYSTEM® IDENTIFICATION CODE	2J003023
PRODUCT NAME	GT-CERAMIC-417
PRODUCT'S APPLICATION FIELD	DUCT UNIONS SEALING FOR HIGH TEMPERATURE
MATERIAL SPECIFICATION	FIREPROOF CERAMIC FIBER
THICKNESS (mm)	4,0
PCS / BOX	11 ROLLS OF 10 M
GROSS WEIGHT / BOX (Kg)	2,42



Information contained herein is based on careful tests and experience. It reflects our knowledge and is for guidance purpose only. It is given in good faith and user should ensure that the product is fit for purpose before any application. The quoted values are average and should not be taken as maximum or minimum values for specific purposes. Manufacturer and distributor are not responsible for any non-recommended use or consequential damage.



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Data sheet

# Superwool® Papers

## Description

Superwool papers are uniquely designed from Superwool bulk and organic binders. Superwool papers are specially processed to offer excellent performance in high-temperature applications. Superwool papers offer an alternative to traditional solutions due to its unique properties of high refractoriness and excellent non-wetting characteristics to applications requiring direct contact with molten aluminium.

Superwool provides stability and resistance to chemical attack. Exceptions include hydrofluoric acid, phosphoric acid and strong alkalis (i.e. NaOH, KOH). Superwool is unaffected by incidental spills of oil or water. Thermal and physical properties are restored after drying.

Superwool Flex-Wrap is produced from a blend of Superwool high purity fibers and organic binders. Due to its low organic binder content, offgassing is at a minimum.

## Type

Paper manufactured from high temperature insulation wool.

## Classification temperature

From 1100°C (2012°F) to 1300°C (2372°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

- Industrial and domestic appliance gasketing
- Non-Ferrous ingot mould liners
- Aluminium transfer system back-up insulation
- Parting medium in induction furnaces
- Automotive heat shields

## Benefits

- Low biopersistence
- Excellent thermal insulating performance
- Thin, flexible high temperature insulation
- Immune to thermal shock
- Low heat storage
- Easily die-cut to form complex shapes for high temperature gasketing
- Excellent tensile strength
- Low thermal conductivity
- Non-wetting to molten aluminium
- Superwool fibres are exonerated and are not classified as carcinogenic by IARC or under any national regulations on a global basis. They have no requirements for warning labels under GHS (Globally Harmonised System for the classification and labelling of chemicals). In Europe, Superwool fibres meet the requirements specified under NOTA Q of European Directive 67/548. All Superwool fibre products are therefore exempt from the classification and labelling regulation in Europe.



Data sheet

# Superwool® Papers

<u>Paper Product Name</u>	<u>Superwool Plus Paper</u>	<u>Superwool Plus Flex-Wrap</u>	<u>Superwool HT Paper</u>
Fiber Class	AES	AES	AES
<b>Physical Properties</b>			
Manufacturing location	NA, EU, AS	NA	NA, EU, AS
Color	white	white	white
Continuous Use Temperature, °C (°F)	1000 (1832)	1000 (1832)	1200 (2192)
Classification Temperature, °C (°F)	1100 (2012)	1100 (2012)	1300 (2372)
Melting Temperature, °F	2327 (1275)	2327 (1275)	2552 (1400)
Density, kg/m <sup>3</sup> (pcf)	176-208 (11-13)	160-208 (10-13)	176-224 (11-14)
Tensile strength, Mpa (psi)	<0.45 (<65)	>0.17 (>25)	<0.35 (<50)
<b>Permanent Linear Shrinkage, % ENV (1094-1)</b>			
after 24hrs @ 1000°C (1832°F)	<2	-	-
after 24hrs @ 1260°C (2300°F)	-	-	<2
<b>Chemical Analysis, % weight basis after firing</b>			
Alumina, Al <sub>2</sub> O <sub>3</sub>	trace	trace	trace
Silica, SiO <sub>2</sub>	60-70	60-70	70-80
Calcium oxide + Magnesium oxide, CaO + MgO	29-42	29-42	18-25
Other			<3
Loss of Ignition, LOI	5-10	2-5	5-10
<b>Thermal Conductivity, W/m•K (BTU•in/hr•ft<sup>2</sup>), per ASTM C201</b>			
200°C (400°F)	-	-	0.04 (0.28)
260°C (500°F)	0.06 (0.39)	0.06 (0.39)	0.06 (0.39)
400°C (750°F)	-	-	0.07 (0.49)
538°C (1000°F)	0.06 (0.65)	0.06 (0.65)	0.06 (0.65)
600°C (1100°F)	-	-	0.1 (0.69)
816°C (1500°F)	0.15 (1.04)	0.15 (1.04)	0.15 (1.02)
982°C (1800°F)	0.19 (1.35)	0.19 (1.35)	-
1000°C (1832°F)	0.23 (1.6)	-	-
1100°C (2000°F)	-	-	0.22 (1.52)
1200°C (2200°F)	-	-	0.25 (1.73)

Data sheet

# Superwool® Papers

### Availability and Packaging (Europe)

Superwool Plus and Superwool HT Paper are available in 500mm, 610mm, 1000mm and 1220mm wide rolls, packed in cartons. Non standard roll widths and lengths can also be supplied.

\*\* Superwool Plus Paper only

Thickness, mm	Length, mm
0.5**	80
1	40
2	20
3	15
4	10
5	10
6	10
7	10
8	10
9	10
10	10

### Availability and Packaging (North America)

Non standard roll widths and lengths can also be supplied.

	Thickness, in (mm)	Length, in (mm)	SqFt/Roll (SqM/Roll)	Mill Rolls Ft/Roll (Linear M/Roll)
Superwool Plus, Superwool Plus Flex-Wrap, Superwool HT	1/16 (1.6)	12 (305)	500 (46.6)	750 (229)
Superwool Plus, Superwool Plus Flex-Wrap, Superwool HT	1/16 (1.6)	24 (610)	500 (46.6)	750 (229)
	1/16 (1.6)	48 (1220)	500 (46.6)	750 (229)
Superwool Plus, Superwool Plus Flex-Wrap, Superwool HT	1/8 (3.2)	12 (305)	250 (23.2)	375 (114)
	1/8 (3.2)	24 (610)	250 (23.2)	375 (114)
Superwool Plus, Superwool Plus Flex-Wrap, Superwool HT	1/8 (3.2)	48 (1220)	250 (23.2)	375 (114)
	1/4 (6.4)	12 (305)	125 (11.6)	185 (56)
Superwool Plus, Superwool Plus Flex-Wrap, Superwool HT	1/4 (6.4)	24 (610)	125 (11.6)	185 (56)
	1/4 (6.4)	48 (1220)	125 (11.6)	185 (56)