FIBERFRAX® PAPER

Fiberfrax Papers are manufactured using our expert non-woven technology and offer exceptional insulating performance and flexibility. Advanced production techniques ensure a highly uniform structure characterized by low thermal conductivity, good handling strength and a smooth surface.

General Characteristics

Fiberfrax Paper has these outstanding characteristics:

- High temperature stability (up to 1250ºC)
- Low thermal conductivity
- Low heat storage
- Lightweight
- Resiliency
- High heat reflectance
- Good dielectric strength
- Excellent corrosion resistance
- Thermal shock resistance
- Flexibility in use
- Easy to wrap, shape and cut

Typical Applications

- High temperature gaskets
- Ingot mould liners
- Automotive heat shields and silencer insulation
- Liquid metal back-up insulation
- Expansion joints
- Induction furnace insulation
- Refractory backup
- Fire protection
- Hot gas filtration media
- Molten metal splash and spark protection

Product Range

Unifrax offers several grades of paper, each with different characteristics.

DS Paper

DS Paper is made from washed Fiberfrax fibers wherein the unfiberfised shot is removed. The product is noted for having exceptionally low thermal conductivity and good handling properties. Its smooth surface provides advantages in seal, gasket and spacer applications. DS paper contains a small amount of organic binder for increased handling strength.

FT Paper

FT Paper is a free thickness paper made from unwashed high purity Fiberfrax ceramic fibers. Its higher density and binders give performance properties ideal for most refractory applications.

110 Paper

This is a clay-filled, sheeted ceramic fiber paper which is denser and more rigid than other standard grade products. The rigidity is maintained even after burnout of the organic bonding agents. The good dielectric, compression resistance, and die cutting characteristics of 110 paper are advantageous in many high temperature gasketing applications.

880 Paper

880 paper is made from a higher alumina content, shorter, smaller diameter fiber and laid up at higher at higher densities. These product parameters lead to reduced shrinkage, higher strength, an increased operating temperature range and better chemical resistivity. This products is used in applications where the service life of standard ceramic fiber papers is reduced.

970 Paper

970 paper is made from high purity Fiberfrax washed fibers. During the manufacture of this product, large portions of the unfiberised particles in the bulk fiber are removed prior to paper lay-up. The washing of the fiber gives a great uniformity to the paper's structure while reducing weight and improving the thermal performance; in addition, this product is preferred in automatic die stamping operations where unfiberised particles in the paper can lead to excessive die wear.

Thermal Conductivity Data (W/mK)

Mean Temp	DS Paper	FT Paper	110 Paper	880 Paper	970 Paper
600ºC	0.08	0.08	0.08	0.06	0.06
800ºC	0.11	0.11	0.09	0.07	0.07
1000ºC	0.17	0.17	0.11	0.08	0.08

Physical Properties

	DS Paper	FT Paper	110 Paper	880 Paper	970 Paper
Colour	White	White	Tan	White	White
Continuous Use Temperature	1250ºC	1250ºC	1260ºC	1427ºC	1260ºC
Melting Point	1800ºC	1800ºC	1538ºC	1927ºC	1793ºC
Product Density	160-200 kg/m^3	200-240 kg/m^3	288 kg/m^3	288 kg/m^3	160 kg/m^3
Tensile Strength	>400kPa	>400kPa	>1000kPa	>900kPa	>600kPa

Chemical Analysis (wt.%)

	DS Paper	FT Paper	110 Paper	880 Paper	970 Paper
SiO_2	48 – 54	48 – 54	45 - 50	58 – 60	47 – 52
Al_2O_3	46 – 52	46 – 52	40 - 44	40 – 42	48 – 53
Na_2O_3	<0.25	<0.25	<1.5	<0.3	<0.5
Fe_2O_3	<0.1	<0.1	<1.1	<0.1	<0.5

Availability

	DS Paper	FT Paper	110 Paper	880 Paper	970 Paper
Thickness	1 – 8mm	1 – 8mm	1.6, 3.2mm	1.6, 3.2mm	0.8, 1.6, 3.2mm
Width	610, 1220mm	610, 1220mm	1066mm	305, 610, 1220mm	305, 610, 1220mm
Length	Various	Various	1220mm	Various	Various