



PRODUCTS GUIDANCE



ITM manufactures two High Temperature Insulation Wools; refractory ceramic fiber and polycrystalline wool. These are used as raw materials for the manufacture of other ceramic fiber product forms, including board, paper, and vacuum formed shapes. ITM's extensive experience with a wide range of user requirements has enabled us to improve and refine the raw material fibers and provide innovative products.

■ FIBREXCEL® / ISOWOOL

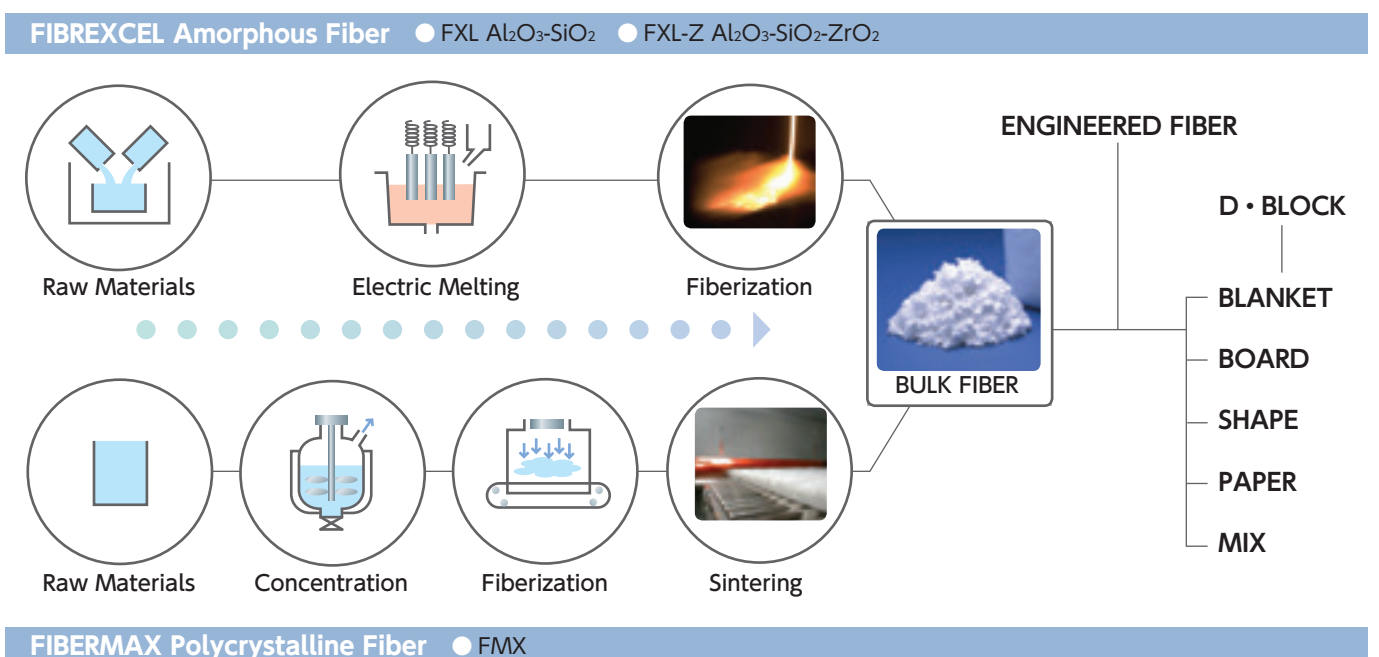
Refractory ceramic fiber which is drawn into fibers by a blowing process using high-velocity air.

The two grades are FXL ($\text{Al}_2\text{O}_3\text{-SiO}_2$) and FXL-Z ($\text{Al}_2\text{O}_3\text{-SiO}_2\text{-ZrO}_2$).

■ FIBERMAX®

This product is made of polycrystalline mullite alumina fiber manufactured using our company's proprietary sol-gel method. It exhibits excellent heat resistance, as well as fiber strength superior to that of conventional products.

[Manufacturing Process of Ceramic Fiber]



PRODUCTS AND AES,RCF,PCW LIST PDF

Classification	Product type	Maximum Use Temperature (°C)*	Brand name	Product name	Bulk Density (kg/m³)	Remarks	
AES	① BULK	1100*	ISOWOOL	BSSR1100BULK	-		
AES		1100*	ISOWOOL	BSSR1100BULK C	-		
AES		1300*	ISOWOOL	BSSR1300BULK	-		
AES		1300*	ISOWOOL	BSSR1300BULK C	-		
RCF		1260	ISOWOOL	1260 BULK	-		
RCF		1450	ISOWOOL	1400 BULK	-		
PCW		1600	FMX	1600 BULK	-		
AES	② ENGINEERED FIBER	1100*	BIOSTAR	BS 100/99 etc	-		
RCF		1260	FXL	RF100/99 ZF600/70 etc	-		
PCW		1600	FMX	FMX100/99 etc	-		
AES	③ BLANKET	1100*	ISOWOOL	BSSR1100BLANKET	100,130		
AES		1300*	ISOWOOL	BSSR1300BLANKET	100,130		
RCF		1260	ISOWOOL	1260 BLANKET	100,130,160		
RCF		1450	ISOWOOL	1400 BLANKET	100,130,160		
PCW		1600	FMX	1600 BLANKET	100,130		
AES	④ BLOCK	1300*	ISOWOOL	BSSR1300 UNIFELT B	-	Interlayer adhesion type	
AES		1300*	ISOWOOL	BSSR1300 UNIBLOK 130	130,160		
AES		1300*	ISOWOOL	BSSR1300 UNIBLOK 160	130,160		
RCF		1260	ISOWOOL	D-BLOCK	170	Sewing type	
RCF		1450	ISOWOOL	ZD-BLOCK	180		
RCF		1500	FMX	15D-BLOCK NE	180		
RCF		1550	FMX	15D-BLOCK SP	140		
PCW		1600	FMX	16D-BLOCK	100,130,170		
AES		⑤ BOARD	1100*	ISOWOOL	BSSR1100BOARD	260	
AES			1100*	ISOWOOL	BSSR1100BOARD HD	340	
AES	1300*		ISOWOOL	BSSR1300BOARD	300		
RCF	1200		ISOWOOL	1260 BOARD	250		
RCF	1400		FXL	1400EX BOARD	300		
RCF	1300		ISOWOOL	1300S BOARD	300		
RCF	1300		ISOWOOL	1300H BOARD	450		
RCF	1600		FMX	1600R BOARD	260		
RCF	1600		FMX	1600SR BOARD	400		
RCF	1700		FMX	1700R BOARD	400		
PCW	1800		FMX	1800R BOARD	500		
PCW	1800		FMX	1800H BOARD	700		
PCW	1500		FMX	1500P BOARD	280		
PCW	1600		FMX	1600P BOARD	350		
PCW	1700		FMX	1700P BOARD	400		
RCF	⑥ WETFELT	1200	FXL	WETFELT	-		
PCW		1600	FMX	16WETFELT	-		
RCF	⑦ VACUUM FORMED SHAPES	1400	FXL	14EX	250		
RCF		1600	FMX	16R	220		
RCF		1600	FMX	16SR	250		
RCF		1700	FMX	17R	350		
PCW		1500	FMX	15P	230		
PCW		1600	FMX	16P	300		
PCW		1700	FMX	17P	350		
AES		⑧ PAPER	1200	-	BS PAPER 320	250	
PCW		1600	FMX	16PAPER	130		
PCW		1600	FMX	16PAPER HA	180		
RCF	⑨ MIX AND CEMENT	1200	FXL	JOINTSEALER 13	-	Filler material	
PCW		1600	FMX	JOINTSEALER 16	-	Filler material	
RCF		1300	FXL	FIBERPLAST 13	-	Joint sealing material	
RCF		1500	FXL	FIBERPLAST 15	-	Joint sealing material	
PCW		1600	FMX	FIBERPLAST 16	-	Joint sealing material	
RCF		1200	FXL	MOLDABLE	-	Adhesive	
PCW		1600	FMX	16D MOLDABLE	-	Adhesive	
RCF		1200	FXL	COATING CEMENT 150	-	Adhesive	
RCF		1200	FXL	COATING CEMENT 180	-	Adhesive	
PCW		1600	FMX	16 CEMENT	-	Adhesive	
RCF		1400	FMX	MB CEMENT	-	Adhesive	
PCW		1600	FMX	16MB CEMENT	-	Adhesive	
PCW		1700	FMX	17D CEMENT	-	Adhesive	
PCW			-	-	RIGIDIZER	-	Surface treating agent
PCW			1500	-	VARIFORM C15, T15	-	Light weight insulating castable that contains PCW
RCF	⑩ ROPE, BRAID CLOTH, TAPE	-	-	SQUARE BRAID	-		
RCF		-	-	ROUND BRAID	-		
AES		-	-	BS CS ROPE	-	Blanket enclosed in a fiberglass braid	
AES		-	-	BS TWIST ROPE	-	Three-ply rope	
AES		-	-	BS SQUARE BRAID	-		
AES		-	-	BS ROUND BRAID	-		
RCF		-	-	CLOTH SPD/SPD-T	-	- T : Flameless process	
RCF		-	-	CLOTH TP/TP-T	-	- T : Flameless process	
RCF		-	-	TAPE SPD/SPD-T	-	- T : Flameless process	
RCF		-	-	TAPE TP/TP-T	-	- T : Flameless process	
AES		-	-	BS CLOTH SPD/SPD-T	-	- T : Flameless process	
AES		-	-	BS CLOTH TP/TP-T	-	- T : Flameless process	
AES		-	-	BS TAPE SPD/SPD-T	-	- T : Flameless process	
AES		-	-	BS TAPE TP/TP-T	-	- T : Flameless process	
PCW			-	-	FMX CLOTH	-	Textile made from alumina long fiber
	⑪ COATMATERIAL	1200	FXL	MODULE CEMENT	-	Mortar-type adhesive	
		1400	FXL	MODULE CEMENT HS	-	Mortar-type adhesive	
RCF		1500	FXL	D-COAT SL	-	Surface coating material (Solution)	
PCW		1600	FMX	D-COAT 16SL	-	Surface coating material (Solution)	
PCW		1600	FMX	D-COAT 16S	-	Surface coating material (Powder)	
RCF		1400	FMX	COAT 2	-	Surface coating material (Paste)	

Classification: AES (Alkaline Earth Silicate wool) , RCF (Refractory Ceramic Fiber or Product containing Refractory Ceramic Fiber) , PCW (Polycrystalline Wool)

*Temperature notation is grade in BSSR products.

ISOWOOL and ISOWOOL BSSR are trademarks owned by ISOLITE INSULATING PRODUCTS CO., LTD. of Japan.

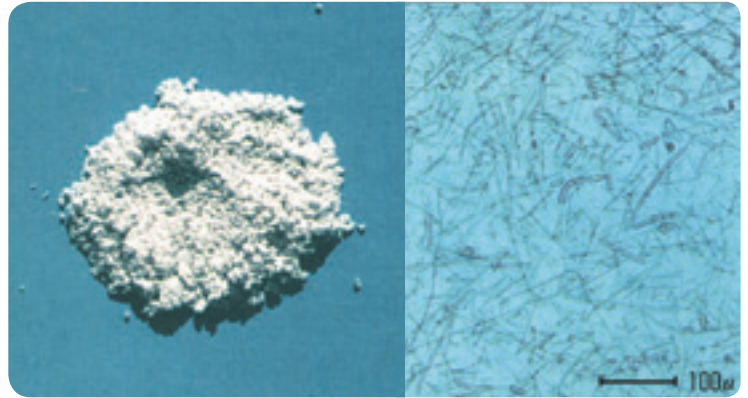
FIBERMAX is a trademark owned by ITM Co., Ltd. of Japan.

Bulk / Engineered Fiber



Bulk

Bulk fiber is commonly used as high-temperature fill and as raw material for Vacuum Formed Shapes, as well as other products.



Engineered Fiber (RF100/99)

Our advanced fiberization and fiber treatment technologies permit our engineered ceramic fiber to meet a wide range of applications through the control of fiber length and fiber shot content.

Engineered Fiber provides structural reinforcement, long life span and enhanced performance to compound materials.

Engineered Fiber is unique in that when added to such materials as resin, metals and ceramics, it dramatically enhances final product performance.

Specifications Bulk

	BSSR1100BULK / C	BSSR1300BULK / C	1260BULK	1400BULK	1600BULK
Classification	AES	AES	RCF	RCF	PCW
Color	White	White	White	White	White
Maximum Use Temperature (°C) *	1100*	1300*	1260	1450	1600
Fiber Diameter (μm)	3.9	4.0	2 ~ 4	2 ~ 4	4 ~ 6
Fiber Length (mm)	-	-	<80	<80	<50
Specific Gravity	-	-	2.73	2.77	2.9
Specific Heat (kJ/ (kg · K))	-	-	1.13	1.13	1.17
Phase	-	-	Amorphous	Amorphous	Polycrystalline
Chemical Composition (%)	Al ₂ O ₃	-	48	31	72
	SiO ₂	73	77	52	53
	ZrO ₂	-	-	-	16
	CaO+MgO	23	20	-	-
	Other	4	3	-	-

*Temperature notation is grade in BSSR products.

Classification: AES (Alkaline Earth Silicate wool), RCF (Refractory Ceramic Fiber or Product containing Refractory Ceramic Fiber), PCW (Polycrystalline Wool)

Dimensions / packing

	BSSR1100/1300BULK	BSSR1100/1300BULK C	1260/1400BULK	FMX1600BULK
Quantity/ Package	15kg	10kg	20kg (Compression packing)	10kg (Compression packing)

Specifications Engineered Fiber

	BIOSTAR	R GRADE	Z GRADE	FMX GRADE
Classification	AES	RCF	RCF	PCW
Color	White	White	White	White
Maximum Use Temperature (°C)	1100	1200	1450	1600
Fiber Diameter (μm)	3.9	2 ~ 4	2 ~ 4	4 ~ 6
Specific Gravity	2.6	2.7	2.8	2.9
Specific Heat (kJ/ (kg · K))	-	1.13	1.13	1.17
Phase	-	Amorphous	Amorphous	Polycrystalline · Intermediate Alumina
Chemical Composition (%)	Al ₂ O ₃	-	48	31
	SiO ₂	73	52	53
	ZrO ₂	-	-	16
	CaO+MgO	23	-	-
	Other	4	-	-

Classification: AES (Alkaline Earth Silicate wool), RCF (Refractory Ceramic Fiber or Product containing Refractory Ceramic Fiber), PCW (Polycrystalline Wool)

Blanket



Blanket is a high tensile strength needed product made from bulk fiber.

It doesn't contain organic binders, therefore it will maintain strength at high-temperature without contamination inside the furnaces.

Thermal conductivity W/m · K

		BSSR1100 BLANKET100	BSSR1100 BLANKET130	BSSR1300 BLANKET100	BSSR1300 BLANKET130	BLANKET100	BLANKET130	BLANKET160
Average Temperature (°C)	400	0.11	0.10	0.07	0.06	0.10	0.09	0.09
	600	0.20	0.18	0.16	0.14	0.14	0.13	0.12
	800	0.31	0.28	0.28	0.24	0.20	0.18	0.17
	1000	-	-	0.46	0.35	0.29	0.26	0.24
	1200	-	-	-	-	0.42	0.36	0.33

Specifications

		BSSR1100 BLANKET	BSSR1300 BLANKET	1260 BLANKET	1400 BLANKET	FMX1600 BLANKET
Classification		AES	AES	RCF	RCF	PCW
Color		White	White	White	White	White
Maximum Use Temperature (°C) *		1100*	1300*	1260	1450	1600
Bulk Density (kg/m ³)		100 · 130	100 · 130	100 · 130 · 160	130 · 160	100 · 130
Chemical Composition (%)	Al ₂ O ₃	-	-	48	31	≥ 72
	SiO ₂	73	77	52	53	Al ₂ O ₃ +SiO ₂ ≥ 99
	ZrO ₂	-	-	-	16	-
	CaO+MgO	23	20	-	-	-
	Other	4	3	-	-	-

*Temperature notation is grade in BSSR products.

Classification: AES (Alkaline Earth Silicate wool)、RCF (Refractory Ceramic Fiber or Product containing Refractory Ceramic Fiber)、PCW (Polycrystalline Wool)

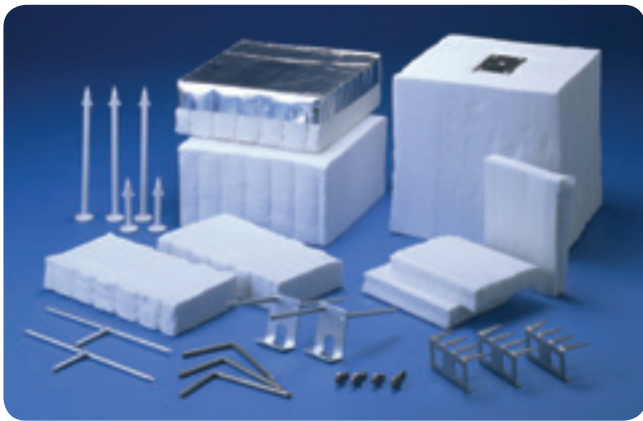
Dimensions / packing

		BSSR1100BLANKET · BSSR1300BLANKET			1260BLANKET · 1400BLANKET			
Size (mm)	Thickness	12.5	25	50	6*	12.5	25	50
	Width	600			600			
	Length	7200		3600	7200		3600	
Quantity / Package (sheets)		2	1	1	4*	2	1	1

*1260 Blanket only

		FMX1600BLANKET			
Size (mm)	Thickness	12.5		25	
	Width	610			
	Length	3600	7200	3600	7200
Quantity / Package (sheets)		3	2	2	1

Block



D-Block is made of stacked multiple layers of Blanket which are sewn together under compression. This product has superior uniformity, resilience and dimensional accuracy. There are 6 grade of D-Block according to the temperature conditions of various industrial furnaces. Isowool BSSR UNIBlok is made of stacked multiple layers of AES (Alcaline Earth Silicate) wool which are modularized under compression. In addition, various support brackets are prepared according to the construction conditions.

Thermal conductivity W/m · K

		BSSR UNIBLOK	D · BLOCK	ZD · BLOCK	15D · BLOCK NE	15D · BLOCK SP	16D · BLOCK (100)	16D · BLOCK (130)	16D · BLOCK (170)
Average Temperature (°C)	800	0.38	0.17	0.16	0.17	0.18	0.20	0.18	0.17
	1000	-	0.23	0.22	0.23	0.25	0.29	0.26	0.23
	1200	-	0.31	0.30	0.31	0.35	0.42	0.37	0.33

Specifications

		BSSR UNIBLOK	D · BLOCK	ZD · BLOCK	15D · BLOCK NE	15D · BLOCK SP	16D · BLOCK
Classification		AES	RCF	RCF	RCF	RCF	PCW
Color		White	White	White	White	White	White
Maximum Use Temperature (°C) *		1300	1260	1450	1500	1550	1600
Bulk Density (kg/m ³)		160	170	180	170	140	100 · 130 · 170
Linear Shrinkage (%) × 24 時間	1000°C	-	0.8	-	-	-	-
	1200°C	2.2	2.0	1.2	0.2	0.2	-
	1300°C	-	-	1.5	0.3	0.3	-
	1400°C	-	-	2.0	0.8	0.6	0.3
	1500°C	-	-	-	1.6	1.1	0.7
Chemical Composition (%)	Al ₂ O ₃	-	48	31	55	62	≥ 72
	SiO ₂	77	52	53	45	38	Al ₂ O ₃ +SiO ₂ ≥ 99
	ZrO ₂	-	-	16	-	-	-
	CaO+MgO	20	-	-	-	-	-
	Other	3	-	-	-	-	-

*Temperature notation is grade in BSSR products.

Classification : AES (Alkaline Earth Silicate wool)、RCF (Refractory Ceramic Fiber or Product containing Refractory Ceramic Fiber)、PCW (Polycrystalline Wool)

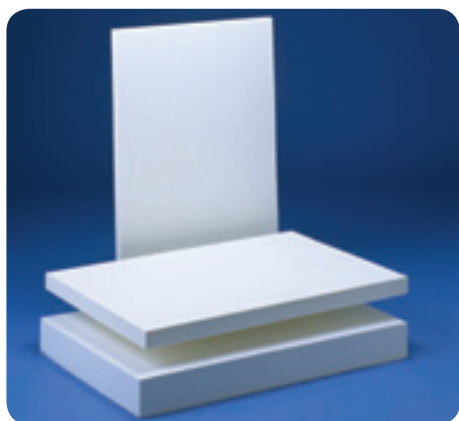
Dimensions / packing

		BLOCK							
Size (mm)	Thickness	30*	50	50	100	150	200	250	300
	Width	200	300						
	Length	150	150	300					
Quantity / Package (pieces)		120	48	24	12	8	6	4	4

*Only 15D · BlockNE · 16DBlock

**For more information on RCF Free BSSR UNIBLOCK (Alkaline Earth Silicate wool), please contact us.

Fibermax Board



Fibermax Board is a high temperature insulation board which derives its exceptional stability at high temperatures from its Fibermax polycrystalline wool content.

It has superior characteristics which possesses high modulus of shrinkage and compressive strength at room and elevated temperatures.

Please do not hesitate to contact us if you are concerned about smoke or smell during the initial heatup.

Thermal conductivity W/m · K

		1500P BOARD	1600R BOARD	1600SR BOARD	1600P BOARD	1700R BOARD	1700P BOARD	1800R BOARD	1800H BOARD
Average Temperature (°C)	800	0.13	0.16	0.16	0.14	0.14	0.14	0.21	0.25
	1000	0.18	0.21	0.20	0.18	0.18	0.17	0.26	0.29
	1200	0.25	0.26	0.23	0.24	0.23	0.22	0.33	0.34
	1400	0.35	0.33	0.28	0.33	0.29	0.27	0.38	0.39

Specifications

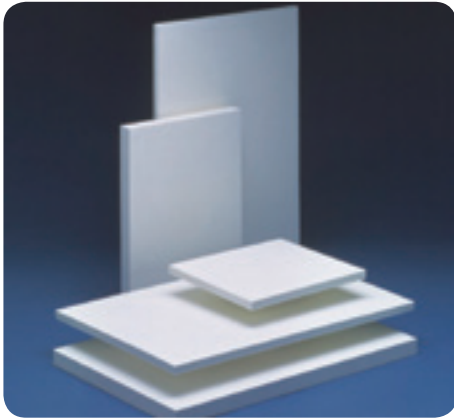
		1500P BOARD	1600R BOARD	1600SR BOARD	1600P BOARD	1700R BOARD	1700P BOARD	1800R BOARD	1800H BOARD
Classification		PCW	RCF	RCF	PCW	RCF	PCW	PCW	PCW
Color		White	White	White	White	White	White	White	White
Maximum Use Temperature (°C)		1500	1600	1600	1600	1700	1700	1800	1800
Bulk Density (kg/m ³)		280	260	400	350	400	400	500	700
Loss on Ignition (%)		4.0	5.0	5.1	4.0	4.0	4.0	4.0	4.2
Linear Shrinkage (%) × 24hr	1300°C	0.4	-	-	-	-	-	-	-
	1400°C	0.6	0.5	0.8	0.5	-	-	-	-
	1500°C	0.2	0.1	- 0.1	- 0.2	0.0	0.0	-	-
	1600°C	-	0.5	- 0.6	- 0.2	- 0.5	- 0.1	0.1	0.1
	1700°C	-	-	-	-	- 0.1	0.4	- 0.2	- 0.1
	1800°C	-	-	-	-	-	-	0.4	0.4
Modulus of Rupture (Mpa)	Normal	0.65	0.64	1.46	0.70	1.27	1.47	1.76	3.17
Maximum Use Temperature After heating		0.31	0.32	0.67	0.49	0.69	0.76	1.37	1.97
Firing treatment		○	○	○	○	○	○	○	○

Classification : RCF (Refractory Ceramic Fiber or Product containing Refractory Ceramic Fiber) , PCW (Polycrystalline Wool)

Dimensions / packing

		1500P BOARD			1600R BOARD			1600SR BOARD			1600P BOARD			1700R BOARD			1700P BOARD			1800R BOARD			1800H BOARD	
Size (mm)	Thickness	20	25	50	20	25	50	20	25	50	20	25	50	20	25	50	20	25	50	20	25	50	25	50
	Width	600			600			600			600			600			600			600				
	Length	900			900			900			900			900			900			900				
Quantity / Package (sheets)		5	4	2	5	4	2	2	2	1	5	4	2	2	2	1	5	4	2	2	2	1	1	1

Board



Fibrexcel/Isowool boards are made from bulk fiber and binders. The bulk density can be manufactured from 250 to 400kg/m³ and the thickness up to 6mm to 50mm.

Please do not hesitate to contact us if you are concerned about smoke or smell during the initial heatup.

Thermal conductivity W/m · K

		BSSR1100 BOARD	BSSR1100 HD BOARD	BSSR1300 BOARD	1260 BOARD	1300S BOARD	1300H BOARD	1400EX BOARD
Average Temperature (°C)	400	0.09	0.08	0.07	0.09	0.08	0.12	-
	600	0.12	0.11	0.12	0.12	0.11	0.14	0.11
	800	0.18	0.16	0.17	0.16	-	-	0.15
	1000	-	-	-	0.21	0.19	0.19	0.20
	1200	-	-	-	-	-	-	0.26

Specifications

		BSSR1100 BOARD	BSSR1100 HD BOARD	BSSR1300 BOARD	1260 BOARD	1300S BOARD	1300H BOARD	1400EX BOARD
Classification		AES	AES	AES	RCF	RCF	RCF	RCF
Color		White	White	White	White	White	White	White
Maximum Use Temperature (°C) *		1100	1100	1300	1200	1300	1300	1400
Bulk Density (kg/m ³)		260	340	300	250	300	400	300
Loss on Ignition (%)		4	4	6	5	0	0	4
Linear Shrinkage (%) × 24hr	800°C	-	-	-	0.2	0.1	0	-
	1000°C	-	-	-	2.0	1.9	2.0	0.1
	1100°C	1.5	1.5	-	-	-	-	0.7
	1200°C	-	-	3.6	3.8	3.2	4.0	1.2
	1300°C	-	-	-	-	4.0	5.0	2.1
Chemical Composition (%)	Al ₂ O ₃	-	-	-	44	32	20	44
	SiO ₂	73	73	76	56	62	76	56
	ZrO ₂	-	-	-	-	6	4	-
	CaO+MgO	23	23	20	-	-	-	-
	Other	4	4	4	-	-	-	-
Modulus of Rupture (Mpa)	Normal	0.7	0.9	1.0	0.39	0.22	0.55	0.76
	1200°C × 24 hours After heating	-	-	-	0.29	-	-	0.78
Firing treatment		-	-	-	-	-	-	○

*Temperature notation is grade in BSSR products.

Classification: AES (Alkaline Earth Silicate wool), RCF (Refractory Ceramic Fiber or Product containing Refractory Ceramic Fiber), PCW (Polycrystalline Wool)

Dimensions / packing

		BSSR BOARD				1260BOARD				1300S BOARD				1300H BOARD				1400EX BOARD		
Size (mm)	Thickness	6	12.5	25	50	6	12.5	25	50	6	12.5	25	50	6	12.5	25	50	20	25	50
	Width	600				600				600				600				600		
	Length	900				900				900				900				900		
Quantity / Package (sheets)		16	8	4	2	16	8	4	2	16	8	4	2	16	8	4	2	5	4	2

Paper



Paper is made from Bulk Fiber and a small amount of organic binders. It has a reliable sealing performance, flexibility and thermal insulation properties, it is widely used for various seals, gaskets and spacer applications.

Upon special request, ultra thin paper in less than 100 micron thickness and paper containing minimal shot can be made available.

Thermal conductivity W/m · K

		BS PAPER320	FMX 16PAPER	FMX 16PAPER HA
Average Temperature (°C)	600	0.10	-	-
	800	-	0.18	0.17
	1000	-	0.28	0.23
	1200	-	0.36	0.31
	1400	-	0.51	0.43

Specifications

		BS PAPER320	FMX 16PAPER	FMX 16PAPER HA
Classification		AES	PCW	PCW
Color		White	White	White
Maximum Use Temperature (°C)		1200	1600	1600
Bulk Density (kg/m ³)		250	130	170
Linear Shrinkage (%) × 24hr	1000°C	1.0	-	-
	1200°C	1.5	-	-
Loss on Ignition (%)		5	5	5
Tensile Strength N/15mm · 1mmT		11	11.7	4.9
Chemical Composition (%)	Al ₂ O ₃	-	72	97
	SiO ₂	70 ~ 80	28	3
	ZrO ₂	-	-	-
	CaO+MgO	18 ~ 25	-	-
	Other	less than 4	-	-

Classification : AES (Alkaline Earth Silicate wool)、PCW (Polycrystalline Wool)

Dimensions / packing

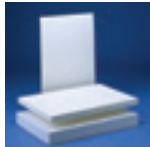
		BS PAPER320					FMX 16PAPER · FMX 16PAPER HA			
Size (mm)	Thickness	0.5	1	2	3	4	0.5*	1	2	3
	Width	600					600			
	Length	18000		9000		1200	1200			
Quantity / Package (sheets)		1			5 or 20		-			

*FMX 16 Paper HA -> 0.4

Electronics

In personal computers, mobile phones and AV home appliances, products representing the information technology age, a number of electronic parts and semiconductors are used. These parts are treated with heating equipment in their manufacturing processes. Ceramic fiber (CF) is conveniently used for heat treatment on many occasions. For typical applications, electronic parts of ceramic condensers are sintered in the temperature range of 1400 to 1600°C FIBERMAX boards and 16D-blocks, with their excellent heat insulation properties, are widely used in high-temperature sintering furnaces. For semiconductor heat-treatment furnaces, such as diffusion furnaces, a wide range of our FIBERMAX shapes is extensively used, since ITM Co., Ltd. excels in producing large sized complicated FIBERMAX shapes. Especially, for the purpose of reducing impurities in wafers, which is indispensable for the miniaturization of semiconductors, we are a pioneer manufacturer with a product line-up of high-purity ceramic fiber which is attracting many users and fulfilling their demands satisfactorily.

Related Products



FIBERMAX BOARD



16D-BLOCK



FIBERMAX SHAPES

Automotive

Ceramic fiber (CF) products are used in automobiles in many locations that cannot be seen. CF is used, for example, in the brake pad of a disk brake to maintain its strength at high temperatures. A series of our specially produced "ENGINEERED FIBER" whose fiber length, fiber diameter, and shot content are controlled optimally for this application satisfies various requirements of major Japanese friction materials manufacturers.

CF paper is used for some air bag filters. With our fiberization technology and paper making technology, ITM Co., Ltd. has developed a special paper with the appropriate air-permeability. A number of other CF products of ITM Co., Ltd. are used in exhaust gas devices such as mufflers, and in exhaust gas cleaning devices.

Related Products



ENGINEERED FIBER



CERAMIC FIBER PAPER

Environmental

CF, which has both of the important properties of thermal resistance and insulation, is the indispensable material for saving energy in industrial furnaces. Since the first oil shock in 1973, CF began to be used in industrial furnaces, where it has been contributing to reduced unit oil consumption.

ITM Co., Ltd. uniquely manufactures and sells two different major product lines; CF (FIBREXCEL) and PCW (FIBERMAX). With the capability to design furnace material structure, ITM Co., Ltd. has gained the approval of many customers as a total CF supplier.

Among others, FIBERMAX 16D-blocks maximize FIBERMAX fiber properties, namely low shot content and high ability to restore itself to its original state, obtaining a great deal of attention from users as an epoch-making product with both high thermal insulation and high restoring power. In recent years, a social and environmental problem has been recognized with the release of Volatile Organic Compounds (VOCs) used in large amounts in paint, printing, adhesive, rinsing and other factories. FIBERMAX 16D-blocks are used in deodorant furnaces to treat the toxic elements of VOCs.

Related Products



FIBERMAX 16D-BLOCK

Ceramics

Ceramics are widely used in such items as tableware and sanitary ceramic items seen in daily life, and also as electronic parts in mobile phones and automotive exhaust systems, which we cannot see directly. Our alumina fiber FIBERMAX for high temperature, having excellent thermal properties, is extensively used in various manufacturing processes involving the sintering of these ceramic parts in high temperatures. Also, our Engineered Fiber is frequently mixed with ceramics, and has been increasingly used for this application in order to enhance the strength of ceramics parts and improve their thermal spalling.

Related Products



ENGINEERED
FIBER

Steel

In the steel industry, a number of ceramic fibers are used in the processes following the blast furnace process which melts iron ore, such as steel making, rolling, and heat treatment. Japanese steel manufacturers maintain a top level of manufacturing technology and know-how worldwide, and therefore their requirements for refractory quality are very severe. ITM Co., Ltd. has long experience in developing improved products that satisfy customer requirements, and has accumulated a great deal of vital technology and know-how. ITM Co., Ltd. uniquely manufactures and sells two different major product lines; CF (FIBREXCEL) and PCW (FIBERMAX). With the capability to design furnace material structure, ITM Co., Ltd. has gained the approval of many customers as a total CF supplier.

Among others, FIBERMAX 16D-blocks maximize the properties of FIBERMAX fibers, namely low shot content and high ability to restore itself to its original state, obtaining a great deal of attention from its users as an epoch-making product with both high thermal insulation and high restoring power.

Related Products



FIBERMAX
16D-BLOCK

New Applications

In the past years, ceramic fiber has been mainly applied for thermal insulation of various industrial furnaces for the steel and automotive industries. Now, our product development capability, which has satisfied customers' requirements and foreseen new trends, is creating new markets and new applications, extending beyond conventional ideas.

ITM Co., Ltd. has recently been breaking new ground in next-generation heat-treatment processes with high-purity products having alkaline gradients of less than 100 ppm, and in the world's thinnest ceramic fiber paper, having a thickness of 100 micro-meters.

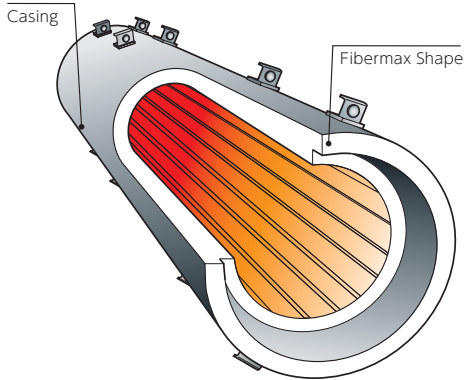
Related Products



CERAMIC
FIBER PAPER

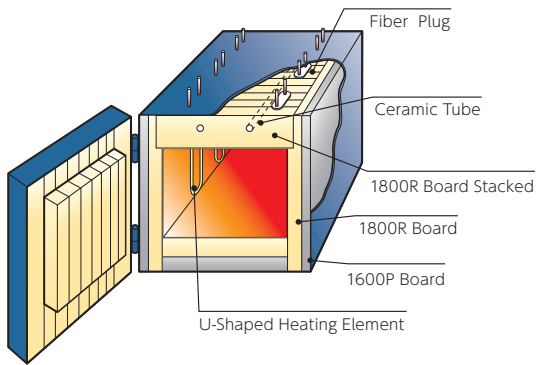
Vacuum Shape for Heat Processing Equipment

Maximum Diameter:1500mm
Maximum Length:1600mm



High Temperature Electric Furnace

Fibermax Board Lining System 1800°C



ITM Co., Ltd.

Kakihara-Ringyo Bldg. 10-1,
Nihonbashi Ohdenmachi, Chuo-ku,
Tokyo 103-0011, Japan
TEL +81-3-5644-7581 FAX +81-3-5644-7585

ITM Europe GmbH

Fritz-Vomfelde-Str. 34
40547 Dusseldorf, Germany
TEL 49 (0)211 53883-269, 279 FAX 49 (0)211 53883-302

<http://www.itm-cf.com>

The information, recommendations and opinions set forth herein are offered solely for your consideration, enquiry and verification, and are not in part or in total to be construed as constituting a warranty. Specifications are subject to change without prior notice.