

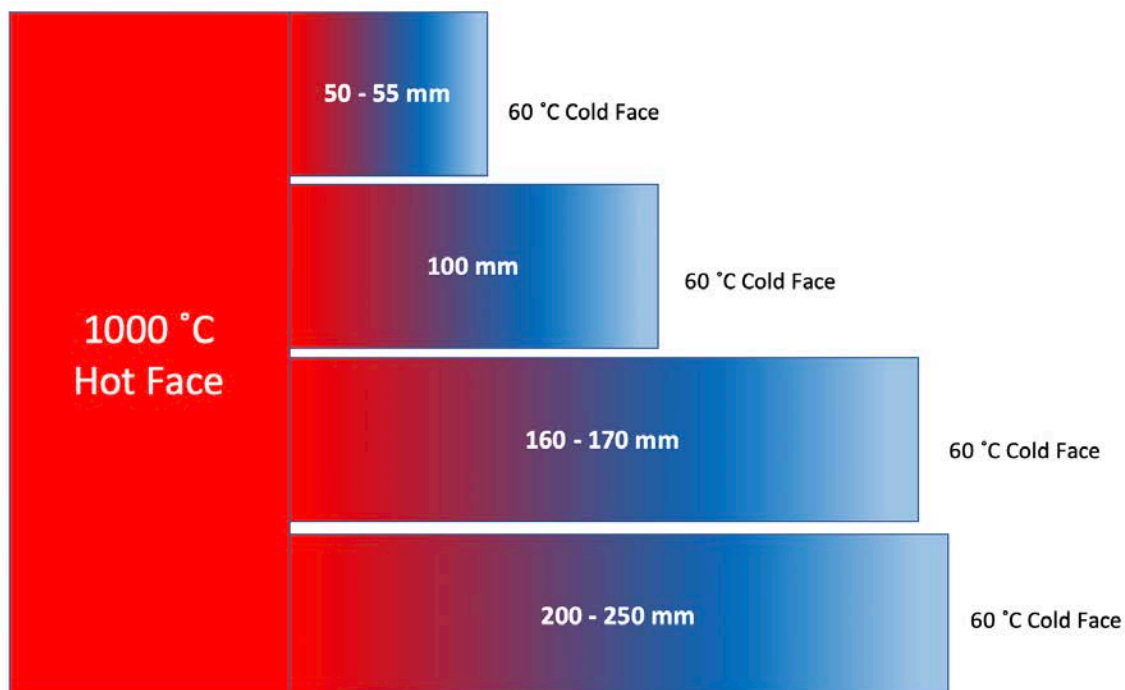
High Strength Rigid Insulation Boards

Composite Systems | Low Cost | High Performance



High Strength Insulation: Most Common Applications

Insulation	Hot Face Temperature °C	Insulation Thickness, mm	Cold Face Temperature °C
HSCI 200	200	15	60
HSCI 300	300	25	61
HSCI 400	400	30	62
HSCI 500	500	35	62
HSI 800	600	10	270
HSCI 600	600	60	66
HSI 800	700	10	307
HSCI 700	700	70	67
HSI 800	800	15	289
HSCI 800	800	85	68
HSI 1000	900	20	290
HSCI 900	900	65	85
HSI 1000	1000	25	284
HSCI 1000	1000	65	93
HSI 1100	1100	30	290
HSCI 1100	1100	60	139
HSI 1200	1200	30	348
HSCI 1200	1200	30	262
HSCI 1300	1300	165	128
HSCI 1400	1400	235	123
HSCI 1500	1500	285	123
HSCI 1600	1600	285	126
HSCI 1750	1650	470	350



HSI 1200 | Technical Datasheet

Wedge HSI 1200 are Calcium Silicate based Refractory Insulation Boards made of high quality refractory mineral fibers and calcium silicate bonded with high temperature clays. These insulation boards possess unique combination of properties for various industrial applications in furnace backup insulation, high temperature gasketing & seals.

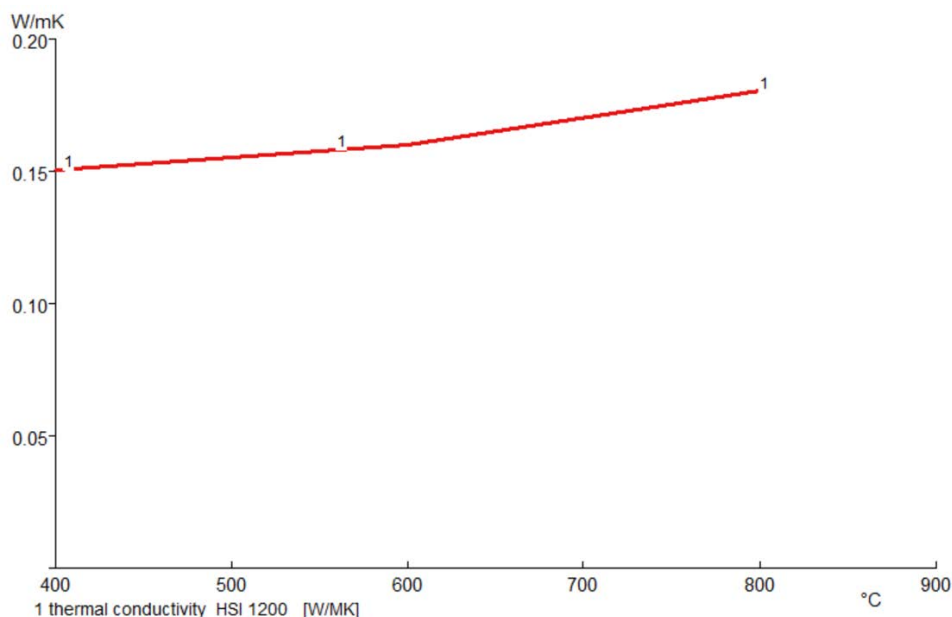
Applications

- Ladle & Tundish Insulation
- Lime Kiln and Cement Kiln Insulation
- High temperature insulation Gaskets
- Boiler & Furnace Insulation
- Oil & Gas Burners Insulation
- Furnace, Dryer, and Oven Insulation
- High temperature Pipe Insulation
- Refractory insulation expansion joints
- Metal clad Gaskets fillers
- Gaskets for centrifugal casting
- Glass rollers as washers on mandrel
- Stainless Steel Plant Rollers Insulation
- Electrical & home appliances insulation gaskets
- Fire Resistant Doors, Lifts, Safes, Cupboards

Features & Benefits

- Very Strong Boards with high compressive strength
- High temperature resistance upto 1200°C
- Low Thermal Conductivity at high temperatures
- High Electrical Resistance at high temperature
- High fire resistance and heat shield properties
- Easy to cut and punch
- Available in moulded pipe section for pipe insulation

Properties	HSI 1200	
Base Materials	Calcium Silicate & Refractory Fibre	
Classification Temperature, °C	1200	
Density, Kg/M3	1000	
Thermal conductivity, W/m.K		
	400 °C	0.15
	600 °C	0.17
	800 °C	0.18
Tensile Strength, Mpa	5	
Flexural Strength, Mpa	6	
Shrinkage % @ 1000 °C	< 1	
Compressive Strength, Mpa	8 - 10	
Loss on Ignition %	7	



HSI 1100 | Technical Datasheet

Wedge HSI 1100 are calcium silicate & wollastonite fibres based boards ideal protection against electrical arcs, used for burner, boiler and dryer gaskets. These boards are made of high quality wollastonite fibres and calcium silicate bonded with high temperature clays. These insulation boards possess unique combination of properties for various industrial applications in furnace backup insulation, high temperature gasketing & seals.

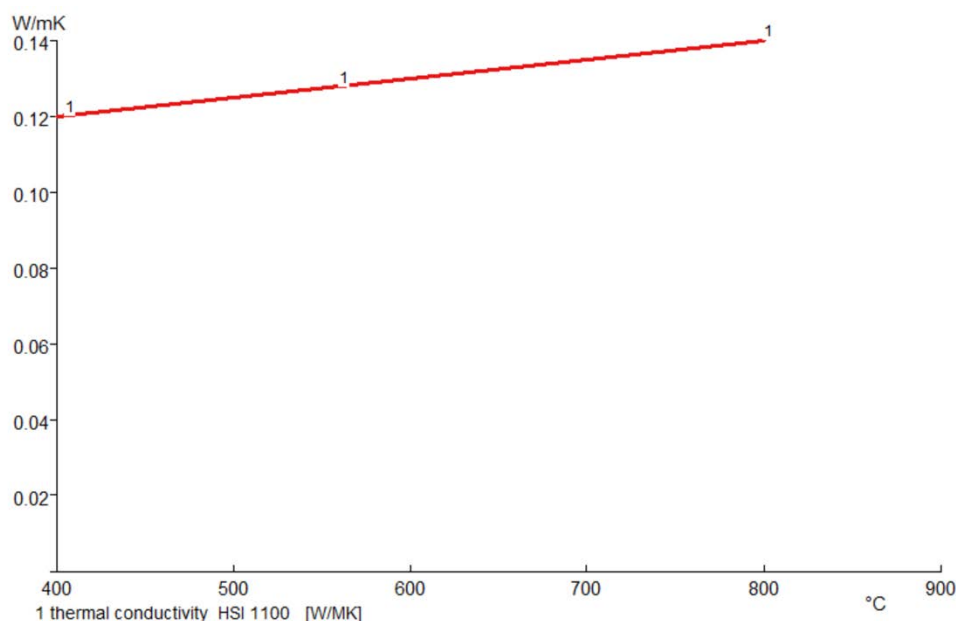
Applications

- Ladle & Tundish Insulation
- Lime Kiln and Cement Kiln Insulation
- High temperature gasket & sealings
- Boiler & Furnace Insulation
- Oil & Gas Burners Insulation
- Furnace, Dryer, and Oven Insulation
- High temperature Pipe Insulation
- Metal clad Gaskets fillers
- Gaskets for centrifugal casting
- Glass rollers as washers on mandrel
- Stainless Steel Plant Rollers Insulation
- Electrical & home appliances insulation gaskets
- Fire Resistant Doors, Lifts, Safes, Cupboards

Features & Benefits

- Very Strong Boards with high compressive strength
- High temperature resistance upto 1100°C
- Low Thermal Conductivity at high temperatures
- High Electrical Resistance at high temperature
- High fire resistance and heat shield properties
- Easy to cut and punch
- Available in moulded pipe section for pipe insulation

Properties	HSI 1100	
Base Materials	Wollastonite fibres & Calcium Silicate	
Classification Temperature, °C	1100	
Density, Kg/M3	1000	
Thermal conductivity, W/m.K		
	400 °C	0.12
	600 °C	0.13
	800 °C	0.15
Tensile Strength, Mpa	5	
Flexural Strength, Mpa	6	
Shrinkage % @ 1000 °C	< 1	
Compressive Strength, Mpa	8 - 10	
Loss on Ignition %	8	



HSI 1000 | Technical Datasheet

Wedge HSI 1000 are calcium silicate & wollastonite fibres based boards ideal for high temperature backup insulation, fire protection, fire doors, electrical home appliances, electrical arcs, furnace backup insulation, high temperature gasketing, duct fire protection, pipe insulation, fire & insulation seals, high temperature electrical insulation, etc.

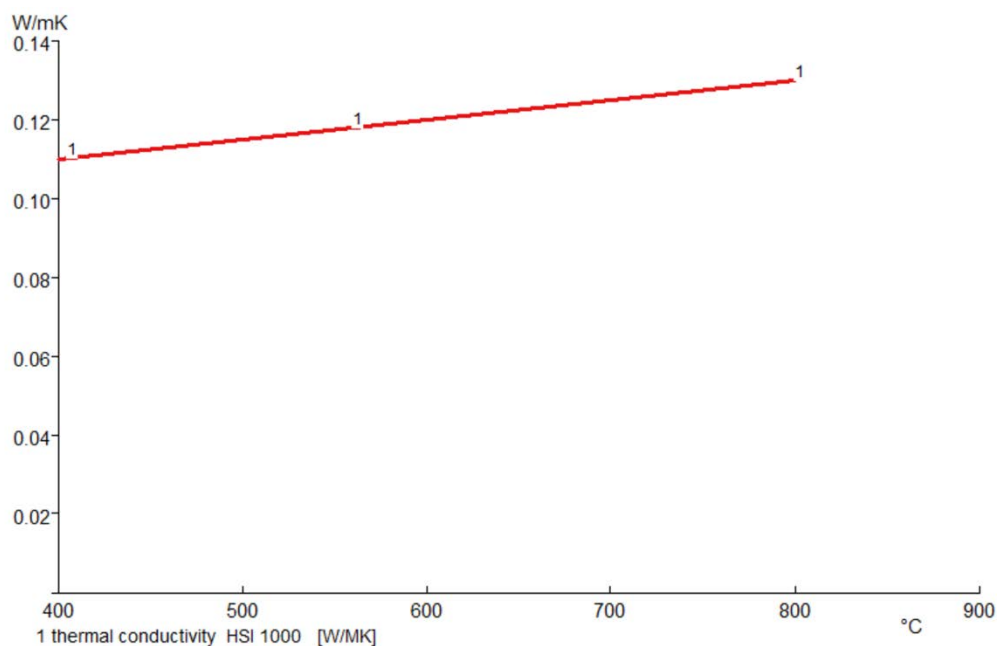
Applications

- Ladle & Tundish Insulation
- Lime Kiln and Cement Kiln Insulation
- High temperature gasket & sealings
- Boiler & Furnace Insulation
- Oil & Gas Burners Insulation
- Furnace, Dryer, and Oven Insulation
- Pipe & duct Insulation
- Metal clad Gaskets fillers
- Gaskets for centrifugal casting
- Glass rollers as washers on mandrel
- Stainless Steel Plant Rollers Insulation
- Electrical & home appliances insulation gaskets
- Fire Resistant Doors, Lifts, Safes, Cupboards

Features & Benefits

- Very Strong Boards with high compressive strength
- High temperature resistance upto 1000°C
- Low Thermal Conductivity at high temperatures
- High Electrical Resistance at high temperature
- High fire resistance and heat shield properties
- Easy to cut and punch
- Available in moulded pipe section for pipe insulation

Properties		HSI 1000
Base Materials		Wollastonite fibres & Calcium Silicate
Classification Temperature, °C		1000
Density, Kg/M3		1000
Thermal conductivity, W/m.K		
	400 °C	0.11
	600 °C	0.12
	800 °C	0.14
Tensile Strength, Mpa		5
Flexural Strength, Mpa		6
Shrinkage % @ 1000 °C		< 1
Compressive Strength, Mpa		8 - 10
Loss on Ignition %		8



HSI 800 | Technical Datasheet

Wedge HSI 800 are rockwool fibres based boards made of high temperature clay bonded with rockwool fibres. These boards have classification temperature of 850°C. These boards are most suitable for pipe insulation applications to reduce “Corrosion Under Insulation” in mineral wool pipe insulation applications.

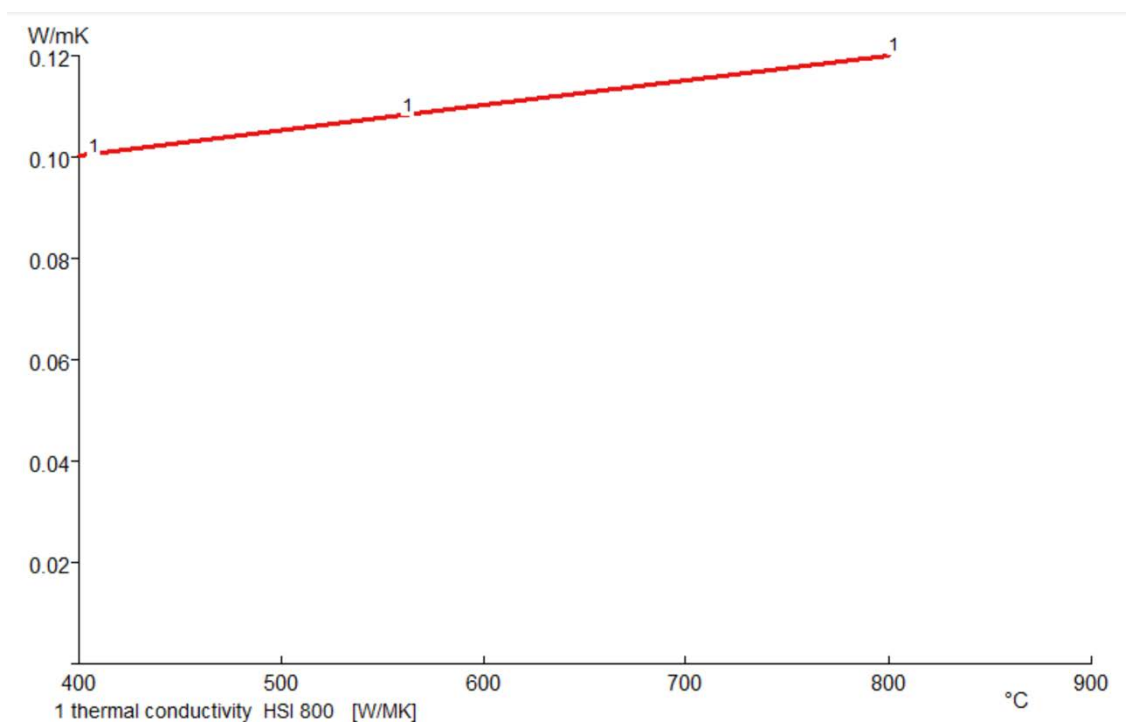
Applications

- Pipe Insulation & Pipe Support
- High temperature gasket & sealings
- Boiler & Furnace Insulation
- Oil & Gas Burners Insulation
- Furnace, Dryer, and Oven Insulation
- Pipe & duct Insulation
- Metal clad Gaskets fillers
- Aluminium & Steel Plant gaskets seals
- Electrical & home appliances insulation gaskets

Features & Benefits

- Strong Boards with high compressive strength
- High temperature resistance upto 850°C
- Low Thermal Conductivity at high temperatures
- High Electrical Resistance at high temperature
- High fire resistance and heat shield properties
- Easy to cut and punch
- Available in moulded pipe section for pipe insulation
- Good in reducing “Corrosion under Insulation”

Properties	HSI 800
Base Materials	Rockwool fibres & Refractory Clays
Classification Temperature, °C	850
Density, Kg/M3	850
Thermal conductivity, W/m.K	
400 °C	0.09
600 °C	0.10
800 °C	0.11
Tensile Strength, Mpa	4
Flexural Strength, Mpa	5
Shrinkage % @ 800 °C	2
Compressive Strength, Mpa	5 - 6
Loss on Ignition %	15



AG06 650 | Technical Datasheet

Wedge AG06 650 are low density, low thickness, flexible commercial grade Aerogel Blanket having extremely high performance in pipe insulation in both industrial and buildings applications. The AG06 650 aerogel insulation blankets are made of high quality silica aerogel and of glass fiber needed blanket.

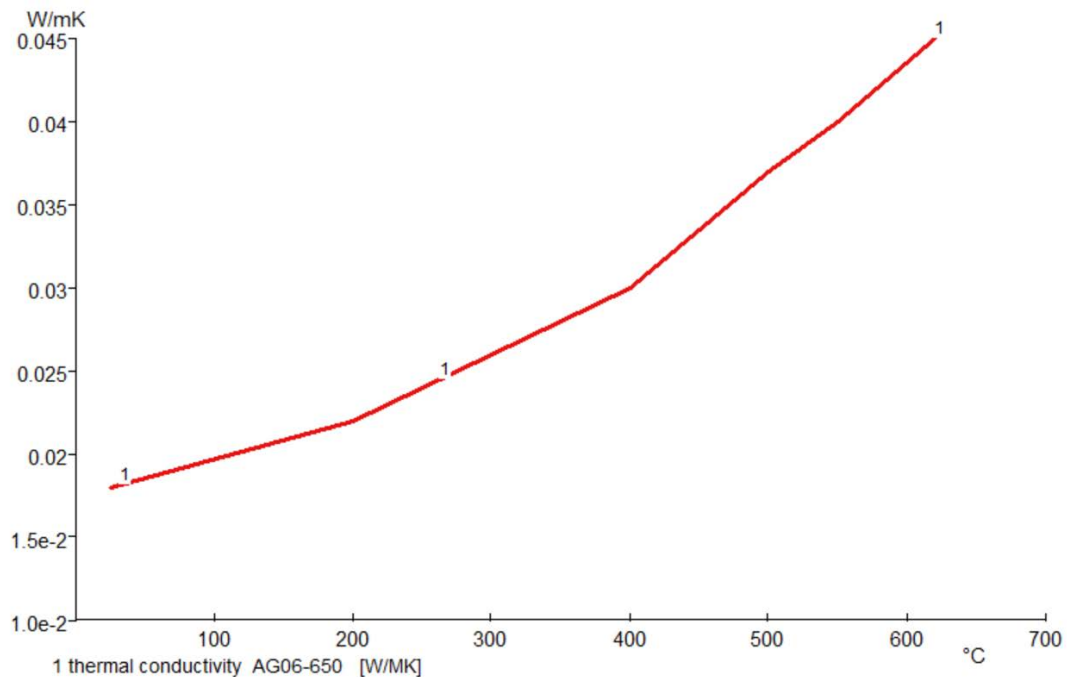
Applications

- Hot Water / Gas / Oil Pipeline
- High heat Steam Pipeline
- Petrochemical industry & power generation
- Back-up insulation in refractory lined pipes
- Exhaust systems
- Filler material for mattresses, cassettes, heat shields, expansion joints
- Prefabricated pipe with insulation
- Tanks, vessels and other equipment
- Pipe line insulation in Petrochemical plants
- Automobile, high-speed, train, and subway
- Building and Construction
- PFP (Passive Fire Protection)

Features & Benefits

- Lightweight, thin, custom made & very flexible
- Noncombustible & Environmentally friendly
- Resistant to most chemicals
- Superior Insulation Performance
- 4 to 5 times better than traditional insulation products with longer service life
- Reduced Insulation Thickness
- Hydrophobicity and Fire-proof
- Repel water from penetrating into pipes
- A1 rating of fire-proof
- Transportation Costs Savings
- Lower packing volume and lower weight can greatly cut down logistics costs

Properties	AG06 650
Base Materials	Aerogel Silica
Classification Temperature, °C	650 to (-) 50
Thickness, mm	5, 10
Density, Kg/M3	220
Thermal conductivity, W/m.K, at 25 °C	0.021



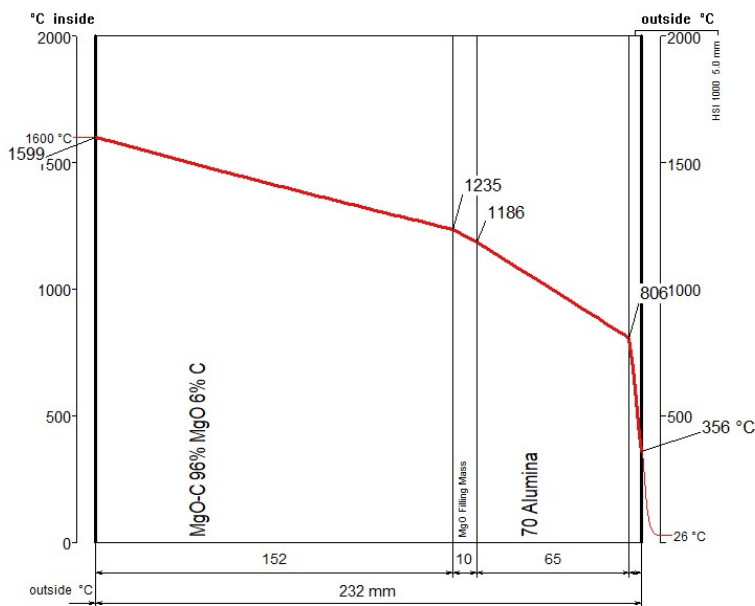
HSCI 1000 | High Strength Composite Systems

Calculation 60 MT Ladle Insulation HSI 5mm C6%

	inside	outside	unit	lining characteristics
Ambient temperature	1600	26	°C	97262 W/m (10676 W/m ²) Heat loss
Surface temperature	1598.7	356.4	°C	8522 MJ/m heat storage
Heat transition coefficient	10000	32.31 ⁽¹⁾	W/m ² K	5117 kg/m weight
Diameter	2436	2900	mm	232 mm total thickness

(1) Calculation method ASTM C680, issue 2004 Emissivity=0.95 - wind =0 m/s

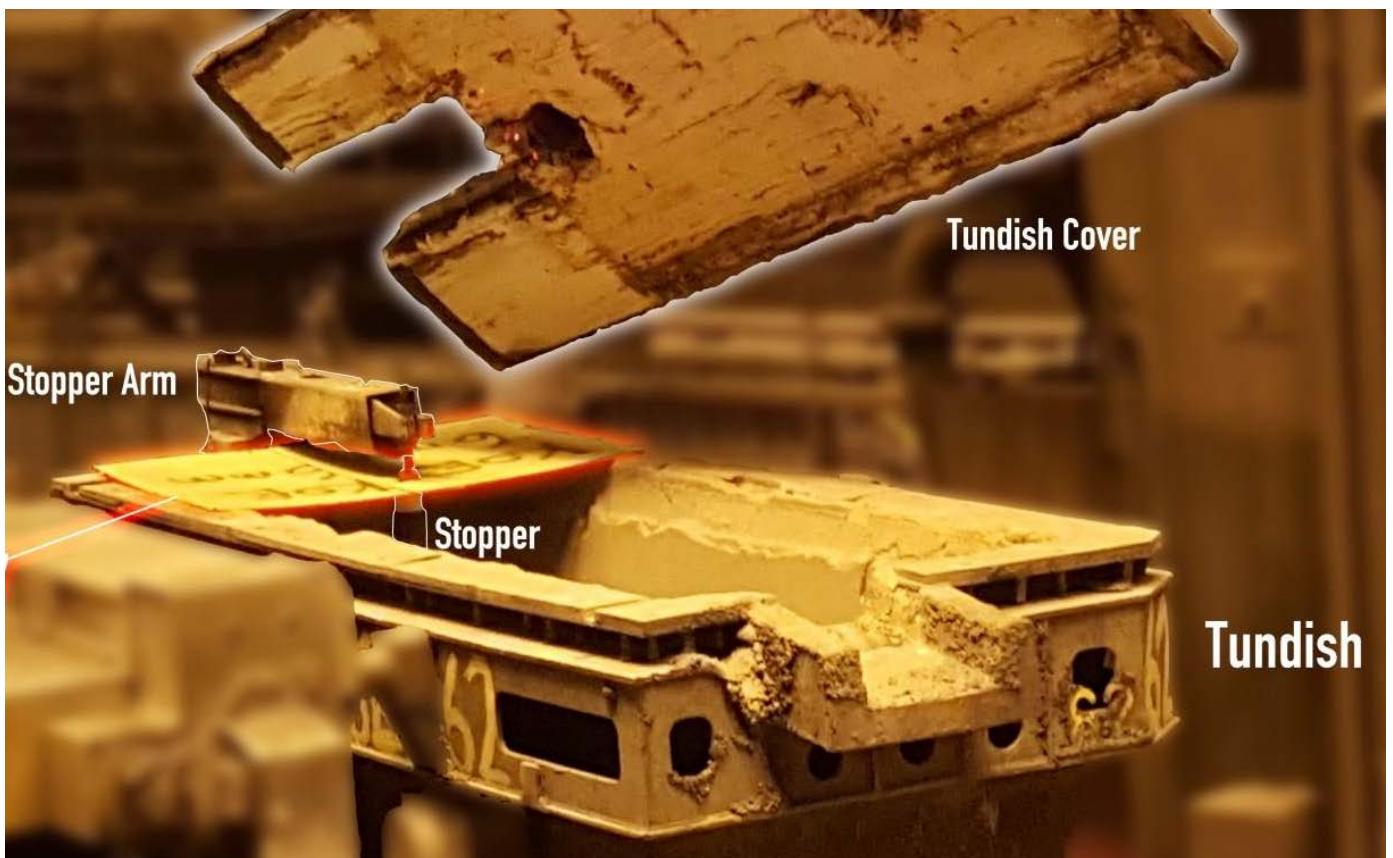
wall layers from inside to outside	Thickn. mm	Density kg/m ³	Classif. °C	temperature		K mean W/mK
				border °C	mean °C	
1 MgO-C 96% MgO 6% C	152	2960	1800	1598.7	1410	5.0
2 MgO Filling Mass	10	2950	1800	1234.6	1210	2.301
3 70 Alumina	65	2000	1600	1185.7	994	1.878
4 HSI 1000	5.0	1100	1000	805.6	588	0.1194
				356.4		



Ladle and Tundish insulation: MGM Millboards are used as a ladle back-up insulator, absorbing heat that is transferred between the refractory fire bricks and the ladle body. This helps to increase the temperature in the ladle, and thus save energy, money, and time.

MGM Millboards sliding gate gaskets give further control over steel flow out of the ladle. Our bespoke gaskets are easy to install and remove. They are highly resistant to steel penetration, and safe to handle.

It is ideally suited to the high temperatures experienced when transferring molten steel, excelling as **splash-guards** or temporary lids.



MG Materials

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