上海新型建材岩棉有限公司
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ABM
FIRESAFE INSULATION

Industrial Insulation

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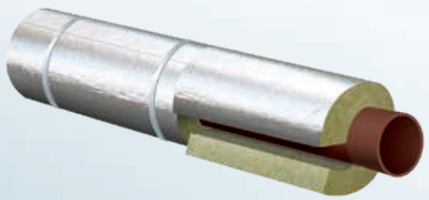
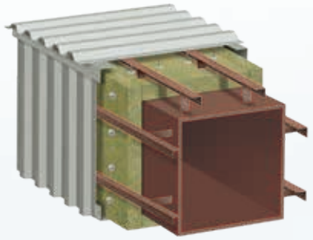
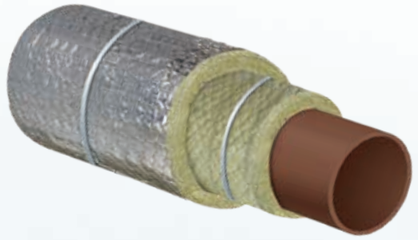
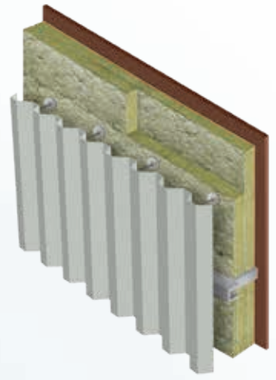
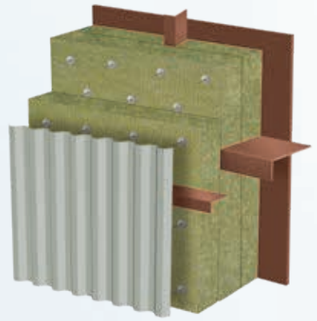
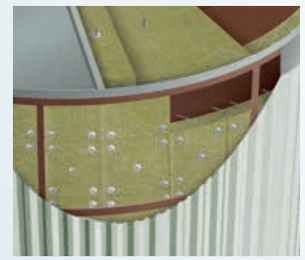




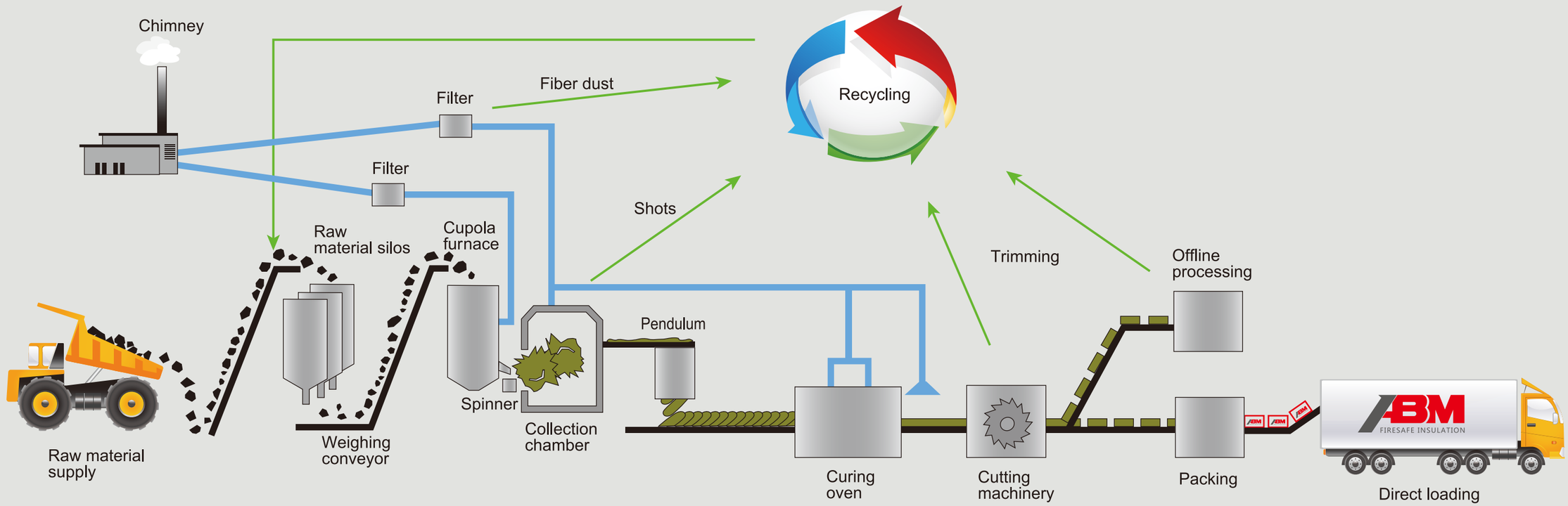








Production Process



Product Properties

Thermal Insulation

Due to the very thin diameter, low shot content and porous structure, ABM rock wool has low thermal conductivity coefficient and therefore excellent thermal insulation performance.

Sound Control

ABM rock wool products are made of numerous fibers, and the numerous fibers form the porous structure which can efficiently reduce sound transmission and reflection.

Weather Resistance

ABM rock wool has good resistance against frost, freeze-thaw and UV. Seasonal temperature changes do not bring it expansion or contraction. If not affected by other materials in the same system, the product is able to service under extreme climate. No corrosiveness to contacting materials.

Environment Friendly

ABM rock wool does not contain any CFCs, HCFCs, HFCs which can damage the ozone in the atmosphere; Asbestos free, and be classified as not classifiable as to carcinogenicity to humans (Group 3) by IARC which belongs to WTO; ABM Rock wool is neutral or alkalescent, doesn't damage, corrode the contacting materials.

Fire Control

ABM Rock wool is made of natural rock, and therefore is non-combustible material with the melting point above 1000℃, retards the fire spreading; When setting on fire, ABM rock wool doesn't generate any poisonous gas or flaming droplets; The excellent resistance to high temperature and low thermal conductivity at high temperature can make much more time to save life and reduce property loss.

Water Repellent

ABM rock wool products can be water repellent, moisture absorption can be lower than 1%, and does not accumulate moisture in itself, can keep the insulated media dry, therefore fungi-proofing.

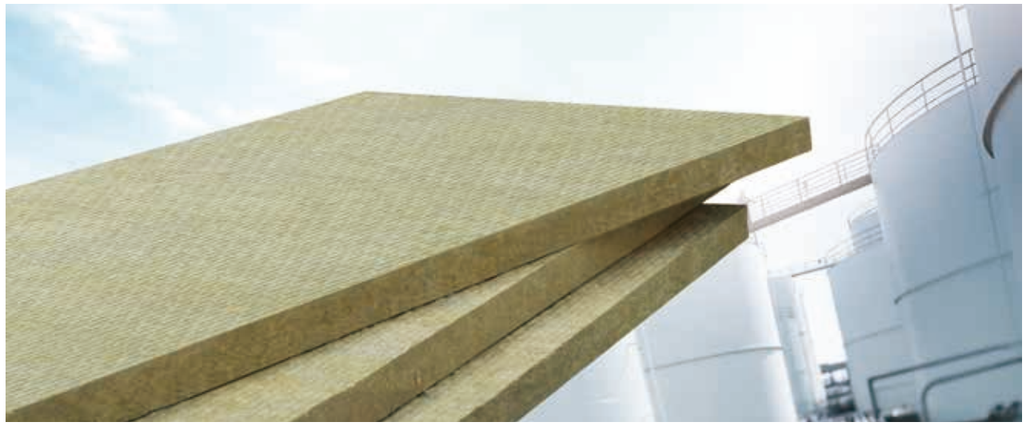
Energy Saving

In the whole life cycle, averagely, ABM rock wool can save more than 100 times energy than it consumes during production and recycling.

Easy Handling

ABM rock wool products are easy to cut, cutting can be done with a wide blade knife very easily. The small size, lightness and flexibility of the products make the installation very convenient.

ABM® Industrial Board



Product Description

ABM® Industrial Board (IB series) is a preformed board with certain strength, good thermal and chemical stability and durability, also has very good performance on thermal, acoustic insulation. The fire classification can reach Class A1. According to different applications and requirements, It can be customized as water repellent, low water leachable chloride content and aluminum glass cloth (ALGC) faced on one side or both sides.

Main Properties and Technical Data

Product Properties		IB60	IB80	IB100	IB120	IB150	Unit	Standard
Thermal Conductivity	50℃	≤0.040	≤0.038	≤0.038	≤0.038	≤0.038	W/(m•K)	GB/T 10295 ASTM C518 ASTM C177
	100℃	≤0.046	≤0.045	≤0.045	≤0.045	≤0.045		
	150℃	≤0.060	≤0.058	≤0.056	≤0.055	≤0.055		
	200℃	≤0.077	≤0.071	≤0.067	≤0.064	≤0.062		
	250℃	≤0.095	≤0.085	≤0.080	≤0.074	≤0.070		
	300℃	≤0.120	≤0.099	≤0.095	≤0.090	≤0.085		
Max Service Temperature		450	650	750	750	750	℃	ASTM C411
		Facing Materials: 80						
Thermal Load Contraction Temperature		400	600	650	650	650	℃	GB/T 11835
Linear Shrinkage		≤2	≤2	≤2	≤2	≤2	%	ASTM C356
Water vapor sorption*		≤0.02	≤0.02	≤0.02	≤0.02	≤0.02	vol %	GB/T 5480 ASTM C1104M
Water Repellent*		≥99	≥99	≥99	≥99	≥99	%	GB/T 10299
Water leachable chloride content**		≤10	≤10	≤10	≤10	≤10	PPM	ASTM C871
Reaction to Fire		Class A1 Noncombustible, Surface burning characteristics: Smoke Development≤50, Flame Spread≤25					--	GB 8624 ASTM E136 ASTM E84
Organic Content		≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	%	GB/T 11835
Environment		Asbestos free, no CFCs, HCFCs, HFCs					--	--
Corrosiveness		Corrosion Free					--	ASTM C665

*Refer to water repellent products only;
**Refer to low water leachable chloride content products used for austenitic stainless steel, meet ASTM C795's requirements;
Other properties meet GB/T 11835-2007 or ASTM C612's requirements.

Standard Specification

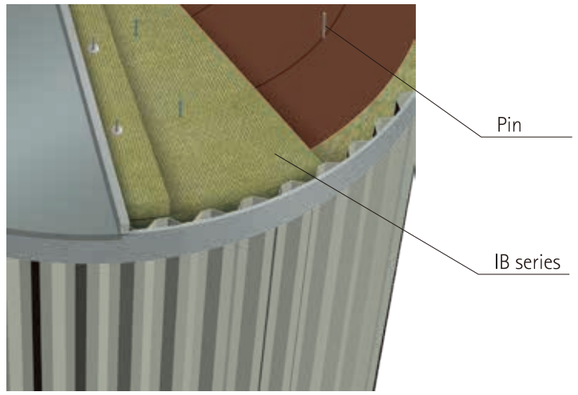
Product Type	IB60	IB80	IB100	IB120	IB150
Nominal Density, kg/m³	60	80	100	120	150
Thickness, mm	40~150	25~150	25~150	25~120	25~100
Size (length x width), mm	1200x600				

Other size or density may be available on request.

Product Application

ABM® industrial boards are widely used on industry furnace, boilers, oven, big diameter pipelines, storage tanks and equipments for thermal, fireproof, acoustic insulation.

For big tank insulation



To avoid thermal bridge, the two layers of IB series products should be secured tightly at all lateral and longitudinal joints of each layer, and the joints of two layers should be staggered at about 150mm;

The IB series products should be fixed with pin and wash, and the pins length should be 15mm bigger than the whole insulation thickness, and the pins should be bent over the washer to keep IB series products against the tank wall.

ABM® Industrial Blanket

Product Description

ABM® Industrial Blanket (IRL series) is a good flexible rolled product, mainly made from natural rock such as basalt and dolomite. On request, the rock wool blanket can be water repellent, and also can be faced with aluminum foil, glass tissue or glass cloth on one side or both sides.

Main Properties and Technical Data

Product Properties	IRL60	IRL80	IRL100	Unit	Standard
Thermal Conductivity (70℃)	≤0.040	≤0.038	≤0.038	W/(m•K)	GB/T 10295 ASTM C177 ASTM C518
Max Service Temperature	450	650	650	℃	ASTM C411
	Facing Materials: 80				
Thermal Load Contraction Temperature	400	400	400	℃	GB/T 11835
Linear Shrinkage	≤2	≤2	≤2	%	ASTM C356
Water vapor sorption*	≤0.02	≤0.02	≤0.02	vol %	GB/T 5480.7 ASTM C1104M
Water Repellent*	≥99	≥99	≥99	%	GB/T 10299
Water leachable chloride content**	≤10	≤10	≤10	PPM	ASTM C871
Reaction to Fire	Class A1 Noncombustible, Surface burning characteristics: Smoke Development≤50, Flame Spread≤25			--	GB 8624 ASTM E136 ASTM E84
Organic Content	≤1.0	≤1.0	≤1.0	%	GB/T 11835
Environment	Asbestos free, no CFCs, HCFCs, HFCs			--	--
Corrosiveness	Corrosion Free			--	ASTM C665

*Refer to water repellent products only;
**Refer to low water leachable chloride content products used for austenitic stainless steel, meet ASTM C795's requirements;
Other properties meet GB/T 11835-2007, ASTM C665 or ASTM C553's requirements.

Standard Specification

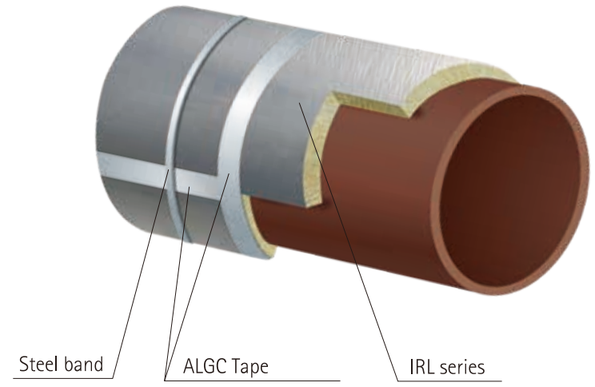
Product Type	IRL60			IRL80			IRL100	
Nominal Density, kg/m³	60			80			100	
Width, mm	600， 900			600， 900			600， 900	
Thickness, mm	50	60	75	50	60	75	40	50
Length, mm	5000	4000	3000	5000	4000	3000	5000	5000

Other size or density may be available on request.

Product Application

ABM® industrial blanket are mainly used as insulation agent in Industry. In industrial field, rock wool blanket is suitable for thermal insulation, noise reduction and fire resistance in uneven surfaces, vessels, tank walls and duct of power plant, petrochemical plant etc.

For Pipe Insulation



The blankets are secured with two steel banding at about 100mm from the lateral joints and should be covered with profiled aluminium sheet to protect them from mechanical or weather damage.

Neighboring blankets joints should be staggered, and all of the joints of longitudinal and latitudinal should be sealed with tape to reduce thermal bridge.

ABM® Industrial Wire-meshed Blanket

Product Description

ABM® Industrial Wire-meshed Blanket (IRW series) is made of rock wool blanket and galvanized wire mesh or stainless steel wire mesh stitched together by GI or Stainless steel wire. It is flexible, good thermal insulation and easy handling. It can be customized as water repellent, low water leachable chloride content and stitch with aluminum foil blanket.

Main Properties and Technical Data

Product Properties		IRW80	IRW100	IRW120	Unit	Standard
Thermal Conductivity	50℃	≤0.038	≤0.038	≤0.038	W/(m•K)	GB/T 10295 ASTM C518 ASTM C177
	100℃	≤0.047	≤0.045	≤0.045		
	150℃	≤0.058	≤0.056	≤0.055		
	200℃	≤0.071	≤0.067	≤0.064		
	250℃	≤0.085	≤0.080	≤0.074		
	300℃	≤0.099	≤0.095	≤0.090		
Max Service Temperature		650	750	750	℃	ASTM C411
Thermal Load Contraction Temperature		600	650	650	℃	GB/T 11835
Linear Shrinkage		≤2	≤2	≤2	%	ASTM C356
Water vapor sorption*		≤0.02	≤0.02	≤0.02	vol %	ASTM C1104M
Water Repellent*		≥99	≥99	≥99	%	GB/T 10299
Water leachable chloride content**		≤10	≤10	≤10	PPM	ASTM C871
Reaction to Fire		Class A1 Noncombustible, Surface burning characteristics: Smoke Development≤50, Flame Spread≤25			--	GB 8624 ASTM E136 ASTM E84
Organic Content		≤1.5	≤1.5	≤1.5	%	GB/T 11835
Environment		Asbestos free, no CFCs, HCFCs, HFCs			--	--
Corrosiveness		Corrosion Free			--	ASTM C665

*Refer to water repellent products only;
**Refer to low water leachable chloride content products used for austenitic stainless steel, meet ASTM C795's requirements;
Other properties meet GB/T 11835-2007 or ASTM C592's requirements.

Standard Specification

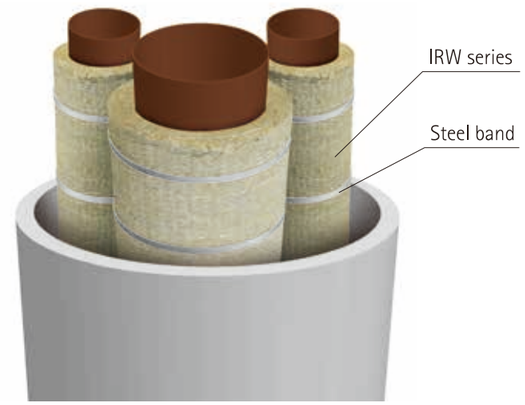
Product Type	IRW80		IRW100		IRW120	
Nominal Density, kg/m³	80		100		120	
Width, mm	600， 900		600， 900		600， 900	
Thickness, mm	25~50	60~100	25~50	60~100	25~50	60~100
Length, mm	5000	3000	5000	3000	5000	3000

Other size or density may be available on request.

Product Application

It is suitable for thermal and acoustic insulation of industrial applications reaching high temperatures, such as industry pipe line, boiler walls, furnace, smoke ducts for power plant, refinery plant, and chemical and oil plant etc.

For special shape, pipe insulation



Cut the IRW series products to required length and wrapped around the pipe and fixed tightly at joints. To avoid thermal bridges, in case of multi-layers insulation, the mats should be secured tightly at all lateral and longitudinal joints of each layer, and the joints of two layers should be staggered at about 150mm;

The IRW series products are fixed with pins and washers, and the pins length should be 15mm bigger than the whole insulation thickness, and the pins should be bent over the washer to keep IRW series against the tank wall.

ABM® Industrial Pipe Section

Product Description

ABM® Industrial Pipe Section (IPS series) is made of rock wool fiber, preformed through some mould and cured by high temperature. For easy installation, the pipe section is split in one side with a joint cutting on the opposite side along with the axis of the pipe. It makes pipe section tightly fit with pipeline. The outer face of the pipe section can be polished to make the consistent and exact insulation thickness in all directions or faced with aluminum glass cloth (ALGC).

Main Properties and Technical Data

Product Properties		IPS110	IPS120	IPS140	Unit	Standard
Nominal Density		110	120	140	kg/m³	--
Thermal Conductivity	50℃	≤0.039	≤0.039	≤0.039	W/(m•K)	GB/T 10295 ASTM C518 ASTM C177
	100℃	≤0.044	≤0.044	≤0.044		
	150℃	≤0.056	≤0.052	≤0.052		
	200℃	≤0.072	≤0.063	≤0.061		
	250℃	≤0.084	≤0.072	≤0.070		
	300℃	≤0.095	≤0.081	≤0.078		
Max Service Temperature		450	650	650	℃	ASTM C411
		Facing Materials: 80				
Thermal Load Contraction Temperature		400	600	600	℃	GB/T 11835
Linear Shrinkage		≤2	≤2	≤2	%	ASTM C356
Water vapor sorption*		≤0.02	≤0.02	≤0.02	vol %	ASTM C1104M
Water Repellent*		≥99	≥99	≥99	%	GB/T 10299
Water leachable chloride content**		≤10	≤10	≤10	PPM	ASTM C871
Reaction to Fire		Class A1 Noncombustible, Surface burning characteristics: Smoke Development≤50, Flame Spread≤25			--	GB 8624 ASTM E136 ASTM E84
Organic Content		≤4.0	≤4.0	≤4.0	%	GB/T 11835
Environment		Asbestos free, no CFCs, HCFCs, HFCs			--	--
Corrosiveness		Corrosion Free			--	ASTM C665

*Refer to water repellent products only;
**Refer to low water leachable chloride content products used for austenitic stainless steel, meet ASTM C795's requirements;
Other properties meet GB/T 11835-2007 or ASTM C547's requirements.

Standard Specification

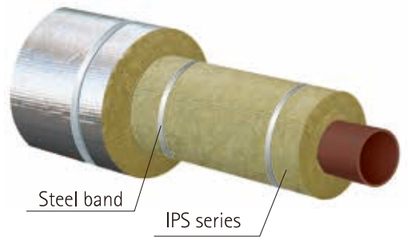
Nominal Diameter		ID	Thickness(mm)									
mm	(")	mm	25	30	40	50	60	70	80	90	100	120	150
15	1/2	22	●	●	●	●							
20	3/4	27	●	●	●	●	●	●	●				
25	1	34	●	●	●	●	●	●	●				
32	1-1/4	43	●	●	●	●	●	●	●	●	●		
40	1-1/2	48	●	●	●	●	●	●	●	●	●		
50	2	60	●	●	●	●	●	●	●	●	●		
65	2-1/2	76	●	●	●	●	●	●	●	●	●		
80	3	89	●	●	●	●	●	●	●	●	●		
90	3-1/2	108	●	●	●	●	●	●	●	●	●		
100	4	114	●	●	●	●	●	●	●	●	●	●	
125	5	140		●	●	●	●	●	●	●	●	●	●
150	6	169		●	●	●	●	●	●	●	●	●	●
200	8	219			●	●	●	●	●	●	●	●	●
250	10	273			●	●	●	●	●	●	●	●	●
300	12	325			●	●	●	●	●	●	●	●	●
350	14	356				●	●	●	●	●	●	●	●
375	15	381				●	●	●	●	●	●	●	●
400	16	406				●	●	●	●	●	●	●	●
450	18	456				●	●	●	●	●	●	●	●
475	19	483						●	●	●	●	●	●
500	20	508						●	●	●	●	●	●
550	22	558							●	●	●	●	●
600	24	610							●	●	●	●	●

Other size or density may be available on request.

Product Application

ABM® Pipe Section main application is pipe line insulation in fire power plant, nuclear power plant or other industry process for thermal and acoustic insulation, human protection, avoid or decrease the condensation, to improve the energy efficiency.

For pipe insulation



The joints in longitudinal and latitudinal directions of two layers shall be staggered, overlap of 150mm in longitudinal is recommended.

Each layer should be banded with three steel bands per pipe section, two for both ends and one in the middle, the end band will be about 100mm from the edge.

ABM® Industrial Granulated Wool

Product Description

ABM® Industrial Granulated Wool (IGW series) is a loose and granular product made of mineral wool fiber. It is mainly used for thermal insulation projects of irregular space, voids, seams, fire-protection spraying coating of steel structure and manufacturing mineral wool acoustic absorption ceiling board.

Main Properties and Technical Data

Product Properties	IGW				Unit	Standard
	T	λ	T	λ		
Thermal Conductivity	-180℃	≤0.015	50℃	≤0.040	W/(m•K)	GB/T 10295 ASTM C518 ASTM C177
	-140℃	≤0.018	100℃	≤0.049		
	-100℃	≤0.022	150℃	≤0.057		
	-60℃	≤0.027	200℃	≤0.067		
	-20℃	≤0.033	250℃	≤0.075		
	20℃	≤0.39	300℃	≤0.091		
Max Service Temperature	650				℃	ASTM C411
Reaction to Fire	Class A1 Noncombustible, Surface burning characteristics: Smoke Development≤50, Flame Spread≤25				--	GB 8624 ASTM E136 ASTM E84
Organic Content	≤0.3				%	GB/T 11835
Environment	Asbestos free, no CFCs, HCFCs, HFCs				--	--
Corrosiveness	Corrosion Free				--	ASTM C665

Other properties meet GB/T 11835-2007's requirements.

Product Application

IGW is mainly used for filling irregular space and apertures in thermal insulation structure, spraying for fire proof of steel structure building and tunnel, manufacturing sound absorption ceiling board, also can be used for cold box of air separation equipment insulation.

Reference List

- Ain Sokhna (Egypt) Power plant
- VIVA (Vietnam) Power plant
- Chica Uno (Chile) Power plant
- CAMPICHE (Chile) Power plant
- Kallpa (Peru) Power plant
- Mundra (India) Power plant
- SIPAT (India) Power plant
- Haramachi (Japan) Power plant
- Ruwais (The united Arab emirates) Refinery
- TISCO Desulfurization and denitrification projects
- Shandong Pacific Fair Pulp and Paper Recovery boiler project
- Nine Dragons Paper Waste Heat Recovery Project
- Sudan 3-7 District oilfield surface construction (Petro China)
- Hadjret EN Nouss 1200 MW (Algeria)
- Bayer (Shanghai) Polymer Co., Ltd. Polycarbonate Project
- Formosa Plastics (Ningbo) Project
- Shanghai Secco 900,000 tons ethylene project
- Jiangsu Oilfield
- Jinshan Petrochemical 4PE project
- Shanghai BASF a Stanford furan hydrogen project
- Suzhou Wangting Thermal power plant
- Taizhou refinery expansion project
- Taizhou Meilanhua Chemical New project
- Shanghai Refinery、refining base project
- Nanhua nitrogenous fertilizer plant nitrogen project
- Nuclear Power Station (Qinshan)
- ……