

TECHNICAL INSULATION

ProRox[®] Product Catalogue

South East Asia



We share our knowledge to your advantage

ROCKWOOL Technical Insulation – a subsidiary of the ROCKWOOL Group - develops innovative technical insulation solutions for the process industry and the shipbuilding & offshore market. Through our comprehensive of product lines ProRox and SeaRox we offer a full spread of sustainable products and system guaranteeing the highest possible thermal and firesafe insulation of all technical installations.

Our over 80 years of experience are reflected in a complete set of high-grade products and expert advice. Today, our dedicated and technically experienced people remain fully committed to provide the very best service and tools in the market and a total range of cutting-edge insulation solutions.

Founding Partner of EIIF

reduce CO2 emissions.

Excellent insulation products, outstanding people.

All ROCKWOOL Technical Insulation solutions meet the most stringent quality and safety standards. All ProRox and SeaRox products and constructions have been tested according to the latest regulations and approved by all major classification societies. As an innovationdriven company we demand excellence. In every segment we keep searching for new systems, methods and solutions. We endeavour to develop ever more efficient products and to constantly optimise production processes and processing technologies. And we deliver! Our people know your market down to the smallest detail and provide continual knowledge and service for the benefit of the client. Besides excellent insulation products, they are the real key to our success. Thanks to their expertise and extensive experience, we can offer you exceptional stone wool solutions, expert tools and an impeccable service



founding partners of the European Industrial

The best solutions, built on solid expertise

Our people's in-depth expertise is the best guarantee that end users in the petrochemicals, power generation, shipbuilding, offshore and the process industries are given the best and most advanced insulation solution. Both in the process industry and in the marine & offshore industry, our stone wool products offer the highest possible protection against heat and energy loss, fire, noise and other unwanted influences. Our experts will be delighted to share their knowledge and advise you in drawing up technical and project specifications.

Up-to-date information and expert tools.

As a highly skilled professional you are always looking for the best possible end result. The quickest way to achieve that is with ROCKWOOL Technical Insulation premium products, and the detailed information and expert tools that come with them, which always incorporate the latest technical findings. That's why you should always check that the information and tools you have are up-to-date. If you have any questions about specific application issues, working methods or product properties, please visit our website at www.rockwoolasia.com or contact one of our local sales organisations (see the contact details on the back of this brochure).

The ROCKWOOL Group

ROCKWOOL Technical Insulation is a subsidiary of the ROCKWOOL Group, the world's largest and most experienced producer of stone wool products. ROCKWOOL International A/S is based in Hedehusene, Denmark. In 2016 the Group generated net sales of EUR 2,202 million. The Group's operations have a large presence in Europe and also facilities in Russia, North America, India and East Asia with more than 11,000 employees in more than 38 countries.

ROCKWOOL products has a melting point above 1000°C

ROCKWOOL products withstand temperatures up to 1000°C, making them exceptionally resistant to fire. This resistance can slow a fire's progress and buy precious time for rescue operations while helping to protect the building's structure from unnecessary damage. Yet while heat and flames are bad enough in a fire, smoke is the serious danger. It can suffocate occupants, and it can incapacitate people who might otherwise have been able to escape. ROCKWOOL insulation keeps toxic smoke from insulation to a minimum for even greater safety for the occupants during fire accident.



Stone wool protects people and the environment

ROCKWOOL products offer effective protection and optimal performance for the entire life cycle of the installation. According to independent research ROCKWOOL is one of the most durable products available with an unequalled combination in the field of environmental improvement, energy savings, CO₂ reduction, acoustic insulation and fire safety. A positive 'carbon footprint': During its entire life cycle, ROCKWOOL insulation will save more than 20,000 times the carbon emissions caused by its production. The fire retardant and fire insulating characteristics of our stone wool products deliver superior protection to people, property and the environment.

Technical insulation shaped by experts.



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Application selector

Y (O) Pipe section

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Heavy duty pipe section

Wired mat

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Heavy duty wired mat

Semi rigid slab



Rigid slab





Technical Insulation





Heavy duty slab

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Compression resistant slab

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Blanket



Materials Pipe section Wired mats Slabs

Project

Loose fill



Granulate wool

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Delivery and storage

ProRox Product Catalogue 5



Tanjung Bin Coal-Fired Power Plant Project in Malaysia New product names, logical structure Each product name is structured in the same clear way:

e.g.: ProRox WM 970 ALU^{SA}

Product range <--!

■ Product identifier ◀---WM = Wired Mats SL = Slabs PS = Pipe Sections BL = Blanket 2 last digits = other product characteristics

Application code

- 1st digit: 3 = acoustics, 5 = compression, 9 = thermal insulation
- Product variants ◀------ALU = reinforced aluminium

ProRox Industrial insulation

In the view of our rebranding strategy we have adapted and clarified the entire range of ROCKWOOL Technical Insulation products. From now on, all our insulation solutions for technical installations in the process industry will be part of the **ProRox** range. The main characteristic of these products is their high thermal insulation capacity. Next to this, they of course also comply with the most stringent requirements on fire resistance and acoustic insulation. Beside you will get an overview of the **ProRox** range and its new names.

NEW GRADE

ProRox PS 960^{SA} ProRox PS 970^{SA} ProRox WM 950^{SA} ProRox WM 960^{SA} ProRox WM 970^{SA} ProRox SL 930^{SA} ProRox SL 950^{SA} ProRox SL 960^{SA} ProRox SL 970^{SA} ProRox SL 978^{SA} ProRox SL 980 ProRox SL 540^{SA} ProRox SL 560 ProRox SL 580 ProRox BL 938^{SA} ProRox BL 958^{sA} ProRox BL 960^{SA}

ProRox LF 970 ProRox GR 903

ProRox Product Catalogue



OLD EQUIVALENT GRADE	
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ROCKWOOL 251	27
ROCKWOOL CRS	28
RockTech B350	29
RockTech B450	30
RockTech B650	31
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Industrial insulation

Application selector

				Pipe	work
				ø <356	ø >356
	NEW GRADE	OLD EQUIVALENT GRADE	DENSITY		
	ProRox PS 960 ^{sa}	RockTech SPI 120	120kg/m ³		
Pipe Sections	ProRox PS 970 ^{sa}	RockTech SPI 150	150kg/m ³		
	ProRox WM 950 ^{sa}		80kg/m ³		
Wired Mats	ProRox WM 960 ^{sa}	RockTech WM650	100kg/m ³		
	ProRox WM 970 ^{sa}	RockTech WM650HD	128kg/m ³		
	ProRox SL 930 ^{sA}		60kg/m ³		
	ProRox SL 950 ^{SA}		80kg/m³		
	ProRox SL 960 ^{SA}	RockTech S650	100kg/m ³		
	ProRox SL 970 ^{SA}	RockTech S650.128	128kg/m ³		
Slabs	ProRox SL 978 ^{sa}	RockTech S850	110kg/m ³		
	ProRox SL 980		145kg/m ³		
	ProRox SL 540 ^{sA}	RockTech S650.160.HC	160kg/m ³		
	ProRox SL 560	ROCKWOOL 251	175kg/m ³		
	ProRox SL 580	ROCKWOOL CRS	150kg/m ³		
	ProRox BL 938 ^{sa}	RockTech B350	(0)		
			60kg/m ³		
Blankets	ProRox BL 958 ^{sA}	RockTech B450	80kg/m ³		
	ProRox BL 960 ^{sa}	RockTech B650	100kg/m ³		
Loose Wool	ProRox LF 970				
LOOSE WOOI	ProRox GR 903				

Thermal insulation

Thermal insulation								
Colu	umns, Tanks, Vessels		Large Voids &	Cold Boxes	Ovens	Furnaces		
Wall (ø <5m)	Wall (ø >5m)	Roof	Cavities	Cold Boxes	Ovens	Turnaces		
		•						

Thermal insulation									
Columns, Tanks, Vessels			Large Voids &	Cold Boxes	Ovens	Furnaces			
Wall (ø <5m)	Wall (ø >5m)	Roof	Cavities	Cold Boxes	Ovens	Furnaces			
					•	•			
•									
	•	- .							
-									
•									

Remarks

Due to an almost limitless range of applications, we have not provided detail information for all the applications. Information is available in the following manuals/standards for industrial insulation:

- CINI manual 'Insulation for industries'
- AGI Q101 (Insulation work on power plant components)
- DIN 4140 (Insulation work on industrial installations and building equipment)

BS 5970 (Code of practice for the thermal insulation of pipework, ductwork, associated equipment and other industrial installations)

For specific applications, our ROCKWOOL Technical Insulation sales team will be pleased to advise you.

ProRox PS 960^{SA}

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30 (Only available in Bukit Raja factory) 32 (Only available in Bukit Raja factory)

Old Equivalent Grade: RockTech SPI 120

Pipe section



662.8

713.6 764.4

815.2

Dimensions Length: 1200 mm Internal diameter pipe insulation Nominal pipe size (NPS) inches (ASTM C585-10) mm 22 1/2 3⁄4 27 34 43 1 1⁄4 1 1/2 49 2 61 74 2 1/2 90 3 102 3 1/2 115 4 4 ½ (Only available in Rayong factory) 128 143 5 170 196 7 221 8 9 246 10 275 11 300 326 12 14 358 408.8 16 18 459.6 510.4 20 22 561.2 612 24

Applications

ProRox PS 960^{SA} is a pre-formed stone wool The shell is secured with galvanised binding can be used: pipe section. The sections are supplied split wire (thickness 0.5mm, at least 3/m). For and hinged for easy snap-on assembly, and insulation thickness above 100mm (or are suitable for the thermal and acoustic insulation of the industrial pipe work.

Compliance

ProRox PS 960^{SA} Pipe Sections comply with the requirements as set by internationally regonized CINI 2.2.03, ASTM C547 Grade A type I, II, IV.

Installation guidelines Assembly

Fit the ProRox PS 960^{SA} closely around the pipe, with the lengthwise (horizontal) joint turned towards the underside. The lengthwise joints must be staggered at an

Note

All steel components exposed to a corrosive environment should be cleaned, degreased and coated with a protective finish.

Advantages

('masonry bond').

Support construction

- Easy to handle and to install

Product properties

	Performance								
The second card and the first	Mean Temp (°C)	50	100	150	200	250	300	350	
Thermal Conductivity	λ (W/mK)	0.037	0.042	0.048	0.055	0.063	0.072	0.083	ASTM C335
Nominal Density		ASTM C302							
Maximum Service Temperature			ASTM C411/ C447						
Reaction to Fire	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed								
Chloride Content	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795								ASTM C871 ASTM C692/ C871
Moisture Absorption	Less than 1% weight								ASTM C1104/ C1104M
Water Absorption	Less than 1 kg/m²								EN 13472

Note: All information and data for technical parameters are based on laboratory testing.

angle of at least 30 degrees to each other. temperatures > 250 °C) the insulation should be applied in at least two layers. In the case of multi-layer insulation it is recommended that the lengthwise and crosswise joints are staggered

On pipes where mechanical loading (e.g. strong vibrations) of the insulation is expected and/or the temperature is higher than 300°C, a support structure (spacers) should be constructed. The number of spacers depends on the temperature and the mechanical load. As a guide, the following intermediate distances

- Horizontal pipe work: 3 to 4m
- Vertical pipe work: 5 to 6m

Finishing

All pipe sections should be finished with a metal (e.g. aluminium) cladding. Where necessary, expansion joints are required to cater for expansion of the pipes. Both the lengthwise and circular joints are fastened with sheet-metal screws: hard aluminium or stainless steel 1/2", 8 per metre. Close expansion joints with a steel tensioning wire. Connections to mountings, head and end caps etc. should be made watertight using an appropriate sealant.

Excellent fit provides optimal performance ■ Wide range of diameters and insulation thicknesses Suitable for use over stainless steel ■ For temperatures up to 350°C, a support construction is not generally necessary

ProRox PS 970^{SA}

Old Equivalent Grade: RockTech SPI 150

Heavy duty pipe section



imensions	Length: 1200 mm
Nominal pipe size (NPS) inches	Internal diameter pipe insulation (ASTM C585-10) mm
1/2	22
3/4	27
1	34
1 1⁄4	43
1 1⁄2	49
2	61
2 1/2	74
3	90
3 1/2	102
4	115
4 ½ (Only available in Rayong factory)	128
5	143
6	170
7	196
8	221
9	246
10	275
11	300
12	326
14	358
16	408.8
18	459.6
20	510.4
22	561.2
24	612
26	662.8
28	713.6
30 (Only available in Bukit Raja factory)	764.4
32 (Only available in Bukit Raja factory)	815.2

Applications

ProRox PS 970^{SA} is a pre-formed high density stone wool pipe section. The sections are supplied split and hinged for easy snap-on assembly, and are specially suitable for the thermal and acoustic insulation of industrial pipe work which is exposed to high temperature and light (e.g. should be applied in at least two layers. In vibrations) mechanical loads.

Compliance

ProRox PS 970^{SA} Pipe Sections comply with the requirements as set by internationally regonized CINI 2.2.03, ASTM C547 Grade A type I, II, IV.

Installation guidelines

Assembly Fit the ProRox PS 970^{SA} closely around the pipe, with the lengthwise (horizontal) joint

Note

All steel components exposed to a corrosive environment should be cleaned, degreased and coated with a protective finish.

Advantages

('masonry bond').

Support construction

- high mechanical loads
- Easy to handle and to install
- Suitable for use over stainless steel

Product properties

	Performance								Standard	
The second Can do at initia	Mean Temp (°C)	50	100	150	200	250	300	350	ASTM C335	
Thermal Conductivity	λ (W/mK)	0.038	0.043	0.048	0.055	0.063	0.072	0.082	ASTIM C335	
Nominal Density		150 kg/m³								
Maximum Service Temperature	650°C								ASTM C411/ C447	
Reaction to Fire	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed									
Chloride Content	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795								ASTM C871 ASTM C692/ C871	
Moisture Absorption	Less than 1% weight								ASTM C1104/ C1104M	
Water Absorption	Less than 1 kg/m²							EN 13472		

Note: All information and data for technical parameters are based on laboratory testing.

turned towards the underside. The lengthwise joints must be staggered at an angle of at least 30 degrees to each other. wire (thickness 0.5mm, at least 3/m). For insulation thickness above 100mm (or temperatures > 250°C) the insulation the case of multi-layer insulation it is recommended that the lengthwise and crosswise joints are staggered

On pipes where mechanical loading (e.g. strong vibrations) of the insulation is expected and/or the temperature is higher than 300°C, a support structure (spacers) should be constructed. The number of spacers depends on the

temperature and the mechanical load. As a guide, the following intermediate distances can be used:

- The shell is secured with galvanised binding
 Horizontal pipe work: 3 to 4m
 - Vertical pipe work: 5 to 6m

Finishing

All pipe sections should be finished with a metal (e.g. aluminium) cladding. Where necessary, expansion joints are required to cater for expansion of the pipes. Both the lengthwise and circular joints are fastened with sheet-metal screws: hard aluminium or stainless steel 1/2", 8 per metre. Close expansion joints with a steel tensioning wire. Connections to mountings, head and end caps etc. should be made watertight using an appropriate sealant.

- Suitable for heavy duty applications which are exposed to high temperatures and
- Excellent fit provides optimal performance
- Wide range of diameters and insulation thicknesses
- For temperatures up to 350°C, a support construction is not generally necessary

ProRox Product Catalogue

ProRox WM 950^{SA}

Wired mat



Dimensions

Standard Width: 600 mm	Standard L	ength (mm)
Thickness(mm)	Malaysia Factory	Thailand Factory
40	5000	5000
50	5000	5000
60	4000	4000
70	2500	3000
75	2500	3000
80	2500	2000
90	2000	2000
100	2000	2000

Applications

ProRox WM 950^{SA} is a lightly bonded stone wool mat stitched on galvanised wire mesh using galvanised wire. The wired mat is suitable for thermal and acoustic insulation of industrial applications reaching high temperatures, such as industrial pipe work, boiler walls, furnaces and smoke ducts.

Compliance

ProRox WM 950^{SA} Wired Mats comply with the requirements as set by the internationally recognized standards like CINI 2.2.02 and ASTM C592 Type I, II and III.

Installation guidelines Assembly

fits the pipe with slight pre-stressing. The closing joints must be staggered at an angle of at least 30 degrees to each other. The closing joints of the mats (lengthwise and circular) must be wired together using steel wire (min. 0.5 mm) or secured with mat hooks. Stainless steel pipes and pipes with a temperature of $> 400^{\circ}$ C should

preferably be insulated with ProRox WM 950^{SA}, in which both the mesh and the stitching wire is stainless steel. If the mats are assembled in multiple layers, both the lengthwise and circular joints must be staggered ('masonry bond').

Support construction

Given the limited pressure resistance of wired mats, in most cases a support is required for the board cladding. As a guideline, assume that a support is required every 3 to 4 metres.

Finishing

The insulation should be finished with a metal (e.g. aluminium) cladding. Where Cut the wired mat to length, so that the mat necessary, expansion joints are provided to cater for expansion of the pipes. Both the lengthwise and circular joints are fastened with sheet-metal screws: hard aluminium or stainless steel 1/2", 8/metre. Close the expansion joints with a steel tensioning wire. Connections to mountings, head and end caps etc. should be made watertight using a suitable sealant.

Note All steel components exposed to a corrosive environment should be cleaned, degreased and coated with a protective finish.

Advantages

Flexible application

Product properties

		Standard						
The second card and the	Mean Temp (°C)	50	100	150	200	250	300	
Thermal Conductivity	λ (W/mK)	0.038	0.046	0.053	0.062	0.071	0.080	ASTM C177
Nominal Density			80 kg	/m³				ASTM C167
Maximum Service Temperature		ASTM C411/ C447						
Linear Shrinkage		ASTM C356						
Reaction to Fire	Flame	EN 13501-1 ASTM E84						
Chloride Content	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795							ASTM C871 ASTM C692/ C871
Moisture Absorption	Less than 1% weight							ASTM C1104/ C1104M
Water Absorption			Less than	1 kg/m²				EN 1609

Note: All information and data for technical parameters are based on laboratory testing.

Suitable for high temperature application

Available in a wide range of thicknesses

■ Suitable for use over stainless steel

ProRox WM 960^{SA}

Old Equivalent Grade: RockTech WM650

Heavy duty wired mat



Dimensions

Standard Width: 600 mm	Standard Length (mm)					
Thickness(mm)	Malaysia Factory	Thailand Factory				
25	5000	5000				
30	5000	5000				
40	5000	5000				
50	5000	5000				
60	4000	4000				
70	2500	3000				
75	2500	3000				
80	2500	2000				
90	2000	2000				
100	2000	2000				

Note

All steel components exposed to a corrosive environment should be cleaned, degreased and coated with a protective finish.

Advantages

high mechanical loads Resistant to high temperatures

Flexible application

Product properties

		Standard						
Thormal Conductivity	Mean Temp (°C)	50	100	150	200	250	300	ASTM C177
Thermal Conductivity	λ (W/mK)	0.037	0.042	0.048	0.056	0.065	0.073	ASTIVI CT77
Nominal Density			100 kg	ı/m³				ASTM C167
Maximum Service Temperature		ASTM C411/ C447						
Linear Shrinkage		ASTM C356						
Reaction to Fire	Flame	EN 13501-1 ASTM E84						
Chloride Content	Conf	ASTM C871 ASTM C692/ C871						
Moisture Absorption	Less than 1% weight							ASTM C1104/ C1104M
Water Absorption			Less than	1 kg/m²				EN 1609

Note: All information and data for technical parameters are based on laboratory testing.

Applications

ProRox WM 960^{SA} is a lightly bonded heavy stone wool mat stitched on galvanised wired mesh with galvanised wire. The wired steel. If the mats are assembled in multiple mat is especially suitable for industrial installations such as high-pressure steam pipes, reactors, furnaces, etc. where high demands are made on the temperature resistance of the insulation.

Compliance

ProRox WM 960^{SA} Wired Mats comply with the requirements as set by the internationally recognized standards like CINI 2.2.02 and ASTM C592 Type I, II and III. Finishing

Installation guidelines

Assembly

Cut the wired mat to length, so that the mat fits the pipe with slight pre-stressing. The closing joints must be staggered at an angle of at least 30 degrees to each other. The closing joints of the mats (lengthwise and circular joints) must be wired together using e.g. steel wire (min. 0.5 mm) or secured with mat hooks. Stainless steel pipes and pipes with a temperature of

> 400°C should preferably be insulated with ProRox WM 960^{SA}, in which both the mesh and the stitching wire is in stainless layers, both the lengthwise and circular joints must be staggered ('masonry bond').

Support construction

Given the limited pressure resistance of wired mats, in most cases a support is required for the board cladding. As a guideline, assume that a support is required every 3 to 4 metres.

The insulation should be finished with a metal (e.g. aluminium) cladding. Where necessary, expansion joints are provided to cater for expansion of the pipes. Both the lengthwise and circular joints are fastened with sheet-metal screws: hard aluminium or stainless steel 1/2", 8/metre. Close the expansion joints with a steel tensioning wire. Connections to mountings, head and end caps, etc. should be made watertight using a suitable sealant.

Suitable for heavy duty applications which are exposed to high temperatures and

- Available in a wide range of thicknesses
- Suitable for use over stainless steel

ProRox WM 970^{SA}

Old Equivalent Grade: RockTech WM650HD

Heavy duty wired mat



Dimensions

Standard Width: 600 mm	Standard L	ength (mm)
Thickness(mm)	Malaysia Factory	Thailand Factory
25	5000	5000
30	5000	5000
40	5000	5000
50	5000	5000
60	4000	4000
70	2500	3000
75	2500	3000
80	2500	2000

Applications

ProRox WM 970^{sA} is a lightly bonded heavy mesh with galvanised wire. The wired mat is layers, both the lengthwise and circular especially suitable for industrial installations where high temperature and vibration resistance is required.

Compliance

ProRox WM 970^{SA} Wired Mats comply with the requirements as set by the internationally recognized standards like CINI 2.2.02 and ASTM C592 Type I, II and III.

Installation guidelines Assembly

Cut the wired mat to length, so that the mat fits the pipe with slight pre-stressing. The closing joints must be staggered at an angle of at least 30 degrees to each other. The closing joints of the mats (lengthwise and circular joints) must be wired together using e.g. steel wire (min. 0.5 mm) or secured with mat hooks. Stainless steel pipes and pipes with a temperature of > 400°C should preferably be insulated

with ProRox WM 970^{SA}, in which both the mesh and the stitching wire is in stainless stone wool mat stitched on galvanised wired steel. If the mats are assembled in multiple joints must be staggered ('masonry bond').

Support construction

Given the limited pressure resistance of wired mats, in most cases a support is required for the board cladding. As a guideline, assume that a support is required every 3 to 4 metres.

Finishing

The insulation should be finished with a metal (e.g. aluminium) cladding. Where necessary, expansion joints are provided to cater for expansion of the pipes. Both the lengthwise and circular joints are fastened with sheet-metal screws: hard aluminium or stainless steel 1/2", 8/metre. Close the expansion joints with a steel tensioning wire. Connections to mountings, head and end caps, etc. should be made watertight using a suitable sealant.

Note

All steel components exposed to a corrosive environment should be cleaned, degreased and coated with a protective finish.

Advantages

high mechanical loads

Resistant to high temperatures Flexible application

Product properties

		Performance								
Thermal Conductivity	Mean Temp (°C)	50	100	150	200	250	300	ASTM C177		
Thermal Conductivity	λ (W/mK)	0.038	0.043	0.050	0.057	0.066	0.076	ASTM CT77		
Nominal Density		128 kg/m³								
Maximum Service Temperature			ASTM C411/ C447							
Linear Shrinkage		ASTM C356								
Reaction to Fire	Flame		EuroCla ce burning bassed, Smc	characterist		ssed		EN 13501-1 ASTM E84		
Chloride Content	Confe	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795								
Moisture Absorption		ASTM C1104/ C1104M								
Water Absorption			Less than	1 kg/m²				EN 1609		

Note: All information and data for technical parameters are based on laboratory testing.

Suitable for heavy duty applications which are exposed to high temperatures and

- Available in a wide range of thicknesses
- Suitable for use over stainless steel

Semi rigid slab



ProRox SL 950^{SA}

Applications

ProRox SL 930^{SA} is a semi rigid stone wool slab. A one-sided facing with fibreglass reinforced aluminium foil (Alu) or glass tissue is available upon request.

Compliance

ProRox SL 930^{SA} Slabs comply with the requirements as set by internationally recognized standards like CINI 2.2.01 and ASTM C612 Type IA and IB and II.

Installation guidelines

- Mechanically fix ProRox SL 930^{SA} using self- adhesive or welded pins. Due to the rigidity of the product, it can also be mounted in cassettes.
- In the case of aluminium foil facing, finish lengthwise and crosswise joints with a selfadhesive aluminium tape (≥75mm). When insulating objects colder than the ambient temperature, where there is a risk of condensation, the insulation should be provided with a vapour barrier. The insulation should be finished with a metal (e.g. aluminium), watertight covering.

Advantages

Available in a wide range of thicknesses

Semi-rigid product combined with aluminium foil or fibreglass coating provides a smart, smooth surface finish

Product properties

		Pe	erformance				Standard		
The sum of Constitution	Mean Temp (°C)	50	100	150	200	250	ASTM C177		
Thermal Conductivity	λ (W/mK)	ASTIVI CT/7							
Nominal Density		60 kg/m³							
Maximum Service Temperature		450°C							
Linear Shrinkage	Les	ASTM C356							
Reaction to Fire	Flame spr		uroClass A1 rning charac I, Smoke dev		passed		EN 13501-1 ASTM E84		
Chloride Content	Conform	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795							
Moisture Absorption		ASTM C1104/ C1104M							
Water Absorption		EN 1609							

Note: All information and data for technical parameters are based on laboratory testing.

Applications

ProRox SL 950^{SA} is a strong, rigid slab, specially developed for the thermal and acoustic insulation of boilers, columns and vessels up to intermediate temperatures.

Advantages

- Suitable up to intermediate temperatures
- Retain shape
- Available in a wide range of thicknesses

Product properties

		Performance									
Thermal Conductivity	Mean Temp (°C)	50	100	150	200	250	300	ASTM C177			
Thermal Conductivity	λ (W/mK)	0.038	0.046	0.053	0.062	0.072	0.081	ASTIM CT/7			
Nominal Density			ASTM C303								
Maximum Service Temperature			ASTM C411/ C447								
Linear Shrinkage		ASTM C356									
Reaction to Fire	Flame	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed									
Chloride Content	Confo	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795									
Moisture Absorption			ASTM C1104/ C1104M								
Water Absorption		EN 1609									

Note: All information and data for technical parameters are based on laboratory testing.



Compliance

 $\mathsf{ProRox}\;\mathsf{SL}\;\mathsf{950}^{\mathsf{SA}}\;\mathsf{Slabs}\;\mathsf{comply}\;\mathsf{with}\;\mathsf{the}\;$ requirements as set by internationally recognized standards like CINI 2.2.01 and ASTM C612 Type IA, II, III and IVA.

ProRox SL 960^{SA} Old Equivalent Grade: RockTech S650

Rigid slab



Applications

ProRox SL 960^{SA} is a strong and rigid slab and is especially suitable for the thermal and requirements as set by internationally acoustic insulation of constructions up to intermediate temperatures.

Compliance

ProRox SL 960^{SA} Slabs comply with the recognized standards like CINI 2.2.01 and ASTM C612 Type IA,II, III, IVA and IVB.

Advantages

Excellent thermal and acoustic insulation

Resistant to high temperatures

Product properties

			Perform	nance				Standard				
	Mean Temp (°C)	50	100	150	200	250	300					
Thermal Conductivity	λ (W/mK)	0.038	0.044	0.050	0.057	0.065	0.075	ASTM C177				
Nominal Density		100 kg/m³										
Maximum Service Temperature		650°C										
Linear Shrinkage	Less than 2% (at max service temperature)							ASTM C356				
Reaction to Fire	Flam	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed										
Chloride Content	Con	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795										
Moisture Absorption	Less than 1% weight							ASTM C1104 C1104M				
Water Absorption	Less than 1 kg/m ²							EN 1609				

Note: All information and data for technical parameters are based on laboratory testing.

Technical Insulation

ProRox SL 970^{SA} Old Equivalent Grade: RockTech S650.128

Applications

ProRox SL 970^{SA} is a strong and rigid stone wool slab, for the thermal and acoustic insulation of constructions where higher temperatures and light mechanical loads

(e.g. vibrations) occur. Typical examples are ovens, furnaces and exhaust ducts.

Advantages

- Suitable for high temperature application
- Retains shape
- Available in a wide range of thicknesses

Product properties

			Perf			
They mal Conductivity	Mean Temp (°C)	50	100			
Thermal Conductivity	λ (W/mK)	0.038	0.043			
Nominal Density						
Maximum Service Temperature						
Linear Shrinkage	Less than 2% (at r					
Reaction to Fire	Eu Surface bur Flame spread = passed					
Chloride Content	Confe	orms to the	Less th stainless as per /			
Moisture Absorption						
Water Absorption			Less th			

Note: All information and data for technical parameters are based on laboratory testing.

High temperature slab



Compliance

ProRox SL 970^{SA} Slabs comply with the requirements as set by internationally recognized standards like CINI 2.2.01 and ASTM C612 Type IA,II, III, IVA and IVB.



ProRox SL 978^{SA} Old Equivalent Grade: RockTech \$850

High temperature slab



ProRox SL 980

Applications

ProRox SL 978^{sA} is a strong and rigid stonewool slab, for the thermal and acoustic insulation of constructions where higher demands are made on the temperature resistance and mechanical loads of the insulation.

Compliance

ProRox SL 978^{sA} Slabs comply with the requirements as set by internationally recognized standards like CINI 2.2.01 and ASTM C612 Type IA, II, III and IVA.

Advantages

- Suitable for heavy duty application which are exposed to high temperatures and
- high mechanical loads
- Retains shape Available in a wide range of thicknesses

Product properties

			Perform	nance				Standard	
	Mean Temp (°C)	50	100	150	200	250	300		
Thermal Conductivity	λ (W/mK)	0.038	0.045	0.053	0.061	0.072	0.083	ASTM C177	
Nominal Density		110 kg/m³							
Maximum Service Temperature		850°C							
Linear Shrinkage	Less than 2% (at max service temperature)							ASTM C35	
Reaction to Fire	Flam	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed							
Chloride Content	Con	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795							
Moisture Absorption		Less than 1% weight							
Water Absorption	Less than 1 kg/m ²							EN 1609	

Note: All information and data for technical parameters are based on laboratory testing.

Applications

ProRox SL 980 is a strong and rigid stonewool slab, for the thermal and acoustic insulation of constructions where higher demands are made on the temperature resistance and mechanical loads of the insulation.

Advantages

- Suitable for heavy duty application which are exposed to high temperatures and high mechanical loads
- Retains shape
- Available in a wide range of thicknesses

Product properties

			Perforn	nance				Standard			
	Mean Temp (°C)	50	100	150	200	250	300				
Thermal Conductivity	λ (W/mK)	0.038	0.043	0.049	0.056	0.064	0.074	ASTM C177			
Nominal Density		145 kg/m³									
Maximum Service Temperature			ASTM C411 / C447								
Linear Shrinkage	L	ASTM C356									
Reaction to Fire	Flame s	Surfac pread = Pa	EuroCla ce burning assed, Smo	characteris		assed		EN 13501-1 ASTM E84			
Chloride Content	Conforms to the	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795									
Moisture Absorption		ASTM C1104 / C1104M									
Water Absorption		EN 1609									

Note: All information and data for technical parameters are based on laboratory testing.





Compliance

ProRox SL 980 Slabs fully comply with the requirements as set by internationally recognized standards like EN14303, CINI 2.2.01 and ASTM C612 Type IA,IB, II, III, IVA and IVB.

Technical Insulation

ProRox SL 540^{SA} Old Equivalent Grade: RockTech S650.160.HC Compression resistant slab



Applications

ProRox SL 540^{SA} is a highly pressure resistant stone wool slab for the thermal and acoustic insulation of constructions where high temperatures and mechanical loads (e.g. vibrations) occur.

Compliance

ProRox SL 540^{sA} Slabs comply with the requirements as set by internationally recognized standards like EN14303, CINI 2.2.01 and ASTM C612 Type IA, IB, II, III and IVA.

Advantages

- Excellent thermal and acoustic insulation
- Resistant to high temperatures
- Resistant to mechanical loads

Product properties

			Perform	nance				Standard			
T 10 1 2 2	Mean Temp (°C)	50	100	150	200	250	300	ACTN4 C477			
Thermal Conductivity	λ (W/mK)	0.038	0.045	0.052	0.062	0.070	0.079	ASTM C177			
Nominal Density		160 kg/m³									
Maximum Service Temperature		650°C									
Linear Shrinkage	Less than 2% (at max service temperature)							ASTM C356			
Reaction to Fire	Flame	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed									
Chloride Content	Cont	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795						ASTM C871 ASTM C692 C871			
Moisture Absorption		Less than 1% weight									
Water Absorption	Less than 1 kg/m²							EN 1609			

Note: All information and data for technical parameters are based on laboratory testing.

Applications

Old Equivalent Grade: ROCKWOOL 251

ProRox SL 560 is a highly pressure resistant ProRox SL 560 Slabs comply with the stone wool slab for the thermal and requirements as set by internationally recognized standards like EN14303, CINI acoustic insulation of constructions where high temperatures and mechanical loads 2.2.01 and ASTM C612 Type IA, IB, II, III and IVA. (e.g. vibrations) occur.

Advantages

- Excellent thermal and acoustic insulation
- Resistant to high temperatures
- Resistant to mechanical loads

Product properties

ProRox SL 560

			Per			
	Mean Temp (°C)	50	100			
Thermal Conductivity	λ (W/mK)	0.037	0.042			
Nominal Density						
Maximum Service Temperature						
Linear Shrinkage	Less than 2% (at r					
Reaction to Fire	Eu Surface bu Flame spread = Passed					
Chloride Content	Les Conforms to the stainless steel					
Moisture Absorption	Less					
Water Absorption						
Compressive Strength	Up to 30					

Note: All information and data for technical parameters are based on laboratory testing.

Compression resistant slab



Compliance



Technical Insulation

ProRox SL 580 Old Equivalent Grade: ROCKWOOL CRS

Compression resistant slab



ProRox BL 938^{SA} Old Equivalent Grade: RockTech B350

Dimensions

Product properties

Standard Width: 600 mm	Standard Length (mm)					
Thickness(mm)	Malaysia Factory	Thailand Factory				
50	5000	5000				
75	2500	3000				
100	2000	2000				

Applications

ProRox BL 938^{sA} is a Blanket type product used in thermal insulation of non-viberating industrial equipment's where temperatures can be up to 350 deg Celcius.

Mean Temp (°C)

Advantages

- Ease of use
- Flexible application

Applications

ProRox SL 580 is a pressure resistant stone wool slab with high resistance to mechanical requirements as set by internationally loads. The compression resistant slab is developed for the thermal insulation of tank 2.2.01 and ASTM C612 Type IA, IB, II, III, roofs subjected to pedestrian traffic, and the thermal and acoustic insulation of construction subjected to a mechanical load.

Compliance

ProRox SL 580 Slabs fully comply with the recognized standards like EN14303, CINI IVA and IVB.

Advantages

Resistant to foot traffic

Available in a wide range of thicknesses

Product properties

			Perform	nance				Standard		
	Mean Temp (°C)	50	100	150	200	250	300	ASTM C177		
Thermal Conductivity	λ (W/mK)	λ (W/mK) 0.038 0.042 0.048 0.055 0.064 0.074								
Nominal Density		150 kg/m³								
Maximum Service Temperature		250°C								
Linear shrinkage	Less than 2% (at max service temperature)							ASTM C356		
Reaction to Fire	Flam	EuroClass A1 Surface burning characteristic; Flame spread = Passed, Smoke development = Passed						EN 13501-1 ASTM E84		
Chloride Content	Conforms to t	ne stainless s	Less than steel corrosi		ation as per	ASTM C79	5	ASTM C871 ASTM C692 C871		
Moisture Absorption		Less than 1% weight						ASTM C1104 C1104M		
Water Absorption		Less than 1 kg/m						EN 1609		
Compressive Strength	Up to 50kPa (At 10% deformation)							EN 826		

Note: All information and data for technical parameters are based on laboratory testing.

Thermal Conductivity λ(W/mK) Nominal Density Maximum Service Temperature Linear Shrinkage Less than 2% (at **Reaction to Fire** Surface bur Flame spread = passed, **Chloride Content** Conforms to the stainle

as pe **Moisture Absorption** Less th Water Absorption Less

Note: All information and data for technical parameters are based on laboratory testing.

Less

Blanket



Compliance

ProRox BL 938^{SA} Blanket comply with the requirements as set by internationally recognized standards like ASTM C553 Type I, II and III.

Pe	rformance			Standard
	50	100	150	
	0.039	0.047	0.057	ASTM C177
(60 kg/m³			ASTM C167
	350°C			ASTM C411/C447
at (at	max service te	ASTM C356		
bur	roClass A1 ning character , Smoke devel	istics; opment = passe	ed	EN 13501-1 ASTM E84
ainle	than 10 ppm ess steel corros r ASTM C795	ASTM C871 ASTM C692/C871		
ess ti	nan 1% weight	ASTM C1104/C1104M		
ess	than 1 kg/m²	EN 1609		

Old Equivalent Grade: RockTech B450

Blanket



Dimensions

Standard Width: 600 mm	Standard Length (mm)					
Thickness(mm)	Malaysia Factory	Thailand Factory				
50	5000	5000				
75	2500	3000				
100	2000	2000				

Applications

ProRox BL 958^{sA} is a flexible stone wool Blanket. It is suitable for the thermal insulation of nonvibrating industrial equipment's where temperatures can be up to 450 deg Celcius.

Compliance

ProRox BL 958^{sA} Blanket comply with the requirements as set by internationally recognized standards like ASTM C553 Type I, II, III and IV.

Advantages

- Suitable up to intermediate temperature
- Ease of use
- Flexible application

Product properties

	Performance							
	Mean Temp (°C)	50	100	150	200	250	ACTN4 C477	
Thermal Conductivity	λ (W/mK)	0.039	0.046	0.054	0.064	0.075	ASTM C177	
Nominal Density		8	80 kg/m³				ASTM C167	
Maximum Service Temperature		450°C						
Linear Shrinkage	Less	ASTM C356						
Reaction to Fire	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed						EN 13501-1 ASTM E84	
Chloride Content	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795						ASTM C871 ASTM C692/C87	
Moisture Absorption	Less than 1% weight						ASTM C1104/ C1104M	
Water Absorption		EN 1609						

Note: All information and data for technical parameters are based on laboratory testing.

ProRox BL 960^{SA}

Old Equivalent Grade: RockTech B650

Dimensions

Density: 100 kg/m ³	Standard Length (mm)					
Thickness(mm)	Malaysia Factory(Bukit Raja)	Thailand Factory(Rayong)				
50	5000	5000				
75	2500	3000				
100	2000	2000				

Applications

ProRox BL 960^{SA} is a Blanket type product used in thermal insulation of non-vibrating industrial equipment's where temperatures can be up to 650 deg Celcius.

Advantages

- Resistant to high temperatures
- Ease of use
- Flexible application

Product properties

	Performance						Standard	
Thormal Conductivity	Mean Temp (°C)	50	100	150	200	250	300	
Thermal Conductivity	λ (W/mK)	0.041	0.049	0.057	0.066	0.074	0.083	ASTM C177
Nominal Density			100 kg/	m ³				ASTM C167
Maximum Service Temperature		650°C						
Linear Shrinkage	Less than 2% (at max service temperature)							ASTM C356
Reaction to Fire	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed						EN 13501-1 ASTM E84	
Chloride Content	Less than 10 ppm Conforms to the stainless steel corrosion specification as per ASTM C795							ASTM C871 ASTM C692/ C871
Moisture Absorption	Less than 1% weight						ASTM C1104/ C1104M	
Water Absorption	Less than 1 kg/m²						EN 1609	

Note: All information and data for technical parameters are based on laboratory testing.

Blanket



Compliance

ProRox BL 960^{SA} Blanket comply with the requirements as set by internationally recognized standards like ASTM C553 Type I, II, III, IV, V, VI and VII.

ProRox LF 970

Loose fill



Applications

ProRox LF 970 ROCKWOOL Loose Fill is lightly bonded impregnated stone wool. This product is especially suitable for thermal insulation and acoustic insulation of joints and irregularly formed constructions.

Advantages	
Ease of use	
Flexible application	

Product properties

	Performance						Standard			
	Mean Temp (°C)	50	100	150	200	250	300	EN 4077		
Thermal Conductivity	λ (W/mK)	0.040	0.049	0.057	0.067	0.075	0.091	EN 12667		
Maximum Service Temperature		680°C (1256°F)					EN 14706 ASTM C411			
Reaction to Fire	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed						EN 13501-1 ASTM E84 (UL 723)			
Water Absorption	< 1 kg/m2 Water vapour absorption (Vapor sorption) ± 0.02% vol						EN 1609 ASTM C1104 C1104M			
Water Leachable Chloride Content (AS Quality)	Chloride content < 10 ppm Conforms to the stainless steel corrosion specification as per ASTM test methods C692 and C871 < 10 mg/kg (ph-value neutral to slightly alkaline)						EN 13468 ASTM C795 ASTM C871			
Water Vapour Diffusion Resistance			μ = 1					EN 12086		

Note: All information and data for technical parameters are based on laboratory testing.

Applications

ProRox GR 903 is a stone wool granulate with no additives. The granulate is especially suitable for the thermal insulation of cold boxes and air separation plants.

Installation guidelines

The guidelines for the use of granulate wool in cold applications are given in the AGI Q 118 standard. These guidelines are available on request. Please ask your ROCKWOOL Technical Insulation sales consultant.

Product properties

ProRox GR 903

								e. 1 1
	Performance							Standard
	Mean Temp (°C)	20	-20	-60	-100	-140	-180	EN 10//7
Thermal Conductivity	λ (W/mK) 0.039 0.033 0.027 0.022 0.018 0.015	EN 12667						
Water Leachable Chloride Content (AS Quality)	Chloride content < 10 ppm Conforms to the stainless steel corrosion specification as per ASTM test methods C692 and C871 < 10 mg/kg (ph-value neutral to slightly alkaline)						EN 13468 ASTM C795 ASTM C871	
Reaction to Fire	EuroClass A1 Surface burning characteristics; Flame spread = passed, Smoke development = passed						EN 13501-1 ASTM E84 (UL 723)	

Note: All information and data for technical parameters are based on laboratory testing.

Granulate wool



Advantages

- Complies with the most stringent requirements for the insulation of cold boxes
- Chemically inert to steel
- Easy to remove for inspection purposes

Delivery and storage

Notes

ROCKWOOL Technical Insulation can accept no liability for any faults in installation and deficiencies. The respective terms of general sale and delivery of ROCKWOOL bv, lodged with the Commercial Court under number 13014428. A copy of these conditions can be provided on request.

Delivery Service

ROCKWOOL Technical Insulation strives to make all its products readily available. Delivery normally takes place from our dealers' warehouses However, direct delivery by ROCKWOOL Technical Insulation to the site of installation is also possible. To simplify construction site logistics, deliveries using containers can be arranged. Contact your dealer for more information.

Packaging and Storage

Where our goods are supplied packed, packaging is included in the price. The polyethylene used in packaging is free of chlorine and sulphur compounds, and suitable for recycling. ROCKWOOL Technical Insulation products must be stored in the original packaging, protected from the weather and off the ground.

ROCKWOOL Technical Insulation offers more than just the rapid delivery of the right product. ROCKWOOL can also act as your partner during the design phase to help to resolve technical problems, such as providing advice for complex technical insulation calculations, construction advice and help with drafting specifications.

Advice

All the values given in this publication are indicative average values, subject to manufacturing tolerances. ROCKWOOL Technical Insulation retains the right to change product specifications at any time without prior notice.



ProRox Product Catalogue

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ROCKWOOL IN ASIA

ROXUL ROCKWOOL

Technical Insulation India Pvt. Ltd

Wing B-2, 2nd Floor, Unit No.206 Boomerang, Near Chandivali Film Studio Chandivali Farm Road, Andheri (E) Mumbai - 400072, Maharashtra, India. T (+91) 022 6715 7700 F (+91) 022 6715 7710

Indonesia Representative Office ROCKWOOL Malaysia Sdn Bhd

Wisma Pondok Indah Tower 3 17th Floor, Jl. Sultan Iskandar Muda V Jakarta 12310, Indonesia T (+62) 21 2965 9071 F (+62) 21 2953 8998

ROCKWOOL Malaysia Sdn Bhd

Lot 4, Solok Waja 1 Bukit Raja Industrial Estate 41050 Klang, Selangor, Malaysia T (+60) 3 3341 3444 F (+60) 3 3342 7290

ROCKWOOL Building Materials (Singapore) Pte. Ltd.

No.8, Tuas Avenue 2, Jurong Town Singapore 639448 T (+65) 6861 4722 F (+65) 6862 3533

ROCKWOOL (Thailand) Limited

B.GRIMM Building 11th Floor No.5, Soi Krungthepkreetha 4 (B.GRIMM) Huamark, Bangkapi Bangkok 10240, Thailand T (+66) 2731 7511-14 F (+66) 2731 7510

Vietnam Representative Office ROCKWOOL (Thailand) Limited

9th Floor, Maritime Bank Tower 180-192 Nguyen Cong Tru Street, District 1 Ho Chi Minh City, Vietnam T (+84) 8 6288 2009 F (+84) 8 6288 4691 Disclaimer: The information contained in this brochure is believed to be correct at the date of publication and is subject to change after the date of printing. ROCKWOOL does not accept responsibility for the consequences of using any product in this brochure in any applications different from those described here.

