

# 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 product lines ProRox and SeaRox we offer a full spread of sustainable products and systems guaranteeing the highest possible thermal and firesafe insulation of all technical installations. Our +75 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 providing the very best service and tools in the market and a total range of cutting-edge insulation solutions.

## 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 innovation-driven 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.

#### 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. Call **0871 222 1780** or visit www.rockwool-rti.co.uk. We like to help your business shape up.

#### 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. The parent company has net turnover of around € 2.18 billion in 2014. ROCKWOOL International has 28 factories in Europe, North America and Asia, and has around 11.000 employees.

#### ROCKWOOL 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.

### 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,  ${\rm CO_2}$  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.

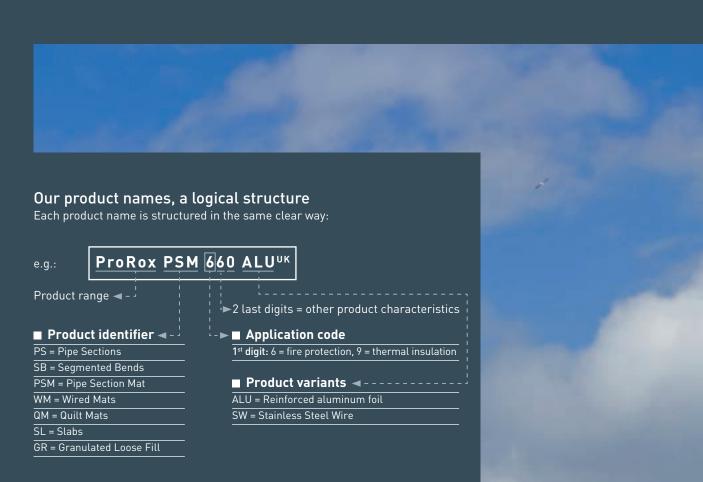
#### Founding Partner of EIIF

■ ROCKWOOL Technical Insulation was one of the founding partners of the European Industrial Insulation Foundation (EIIF), which has established itself as a resource for industries that need to reduce CO<sub>2</sub> emissions.



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In view of our rebranding strategy we have adapted and clarified the entire range of ROCKWOOL Technical Insulation products. 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 excellent thermal insulation performance. Next to this, they of course also comply with the most stringent requirements on fire resistance and acoustic insulation. Below you will get an overview of the **ProRox** range and names.

#### THERMAL INSULATION

	Ρ.
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CLADDING	P.
ProRox GRP 1000	28-29

## Industrial insulation

## Application selector

		Process Pipework	Columns	Vessels	Tank walls
	PRODUCT NAME				
Pipe section	ProRox PS 971 <sup>UK</sup>	•			
Segmented Bends	ProRox SB 971 <sup>uK</sup>	•			
Pipe section Mat	ProRox PSM 971 ALU <sup>UK</sup>		•	•	
	ProRox WM 950	<u>"</u>	•		
Wired Mat	ProRox WM 958 <sup>UK</sup> RENAM	ED!	•	•	
Wired Mat	ProRox WM 960	<b>I</b>	•	•	
	ProRox WM 970 <sup>UK</sup>		•		
	ProRox QM 960 <sup>UK</sup>				
Mat	ProRox QM 960 <sup>UK</sup>				
	ProRox SL 920 <sup>UK</sup>				
	ProRox SL 930 <sup>UK</sup>				
Slab	ProRox SL 950 <sup>UK</sup>				•
3(4)	ProRox SL 960 <sup>UK</sup>		<del>-</del> -		
	ProRox SL 980 <sup>UK</sup>				
Loose Wool	ProRox GR 900 <sup>UK</sup>				
HC Pipe section	ProRox PS 661 <sup>UK</sup>				
HC PSM	ProRox PSM 660 ALU <sup>UK</sup>				
HC Slab	ProRox SL 660 <sup>UK</sup>				
HC Wired Mat	ProRox WM 660 SW <sup>UK</sup>				
Cladding	ProRox GRP 1000				

Tank roof	Ovens	OEM Equipment Covers	Cold boxes	Acoustic Applications	Hydrocarbon PFP	Cladding
				•		
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#### 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:

■ BS 5970 Thermal insulation of pipework, ductwork, associated equipment and other industrial installations in the temperature range -100°C to +870°C - Code of Practice

For specific applications, our RTI sales team will be pleased to advise you.

#### ProRox PS 971<sup>UK</sup>



#### Product description & application

ProRox PS 971<sup>UK</sup> is a pre-formed high density stone wool pipe section. The sections are supplied split and hinged for easy snap-on assembly, and are especially suitable for the thermal and acoustic insulation of industrial pipe work.

**Product**) foil facing: ProRox PS 971 ALU<sup>UK</sup>.

#### Compliance to standards

ProRox PS 971<sup>UK</sup> conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40°C to +700°C. With regards to water repellency at higher temperatures, they also comply with BP Engineering Standard 172.

#### Installation guidelines

The method of fixing depends on the type of application and whether single or multiple layers of ProRox PS 971<sup>UK</sup> are required. Usually the fixing of each layer is achieved with metal tie wires or bands. At least 2 bands per section (max. 450mm centres) positioned not less than 50mm from the end of each section. Typically an exterior cladding is then installed. ProRox PS 971<sup>UK</sup> is compatible with all typical metallic and non-metallic exterior finishes.

#### **Advantages**

- Suitable for heavy duty applications
- Excellent fit provides optimal performance
- Easy to handle and to install
- High temperature use
- High compressive strength Wide range of diameters and insulation thicknesses
- Water repellent to BP standard 172





			Perfo	rman	:e				Norms
Thermal conductivity	T <sub>m</sub> (°C)	EN ISO 8497							
Thermat conductivity	λ (W/mK)	LIN 130 0477							
Maximum Service Temperature			EN 14707						
Reaction to fire				EN 13501-1					
Nominal density			140	kg/m³					EN 13470
Water absorption				kg/m²					EN 13472
				kg/m <sup>3</sup>					BP 172
Water vapour diffusion resistance				ı = 1					EN 14303
Air Flow Resistivity	> 80 kPa.s/m <sup>2</sup> EN 29053							EN 29053	
Designation code	MW EN	14303-		EN 14303					

Industrial insulation



#### Product description & application

ProRox SB 971<sup>UK</sup> is a pre-formed high density stone wool pipe section cut into wedge-shaped segments to suit 1½D pipe bends. The sections are supplied split and hinged for easy snap-on assembly, and are intended exclusively for the thermal and acoustic insulation of pipe bends.

#### Compliance to standards

ProRox SB 971<sup>UK</sup> conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40°C to +700°C. With regards to water repellency at higher temperatures, they also comply with BP Engineering Standard 172.

#### Installation guidelines

Two 11.25° 'starter/finisher' segments and three 22.5° full segments are required to insulate each 90° bend. The segments are securely held in place using tie wires or bands. Typically an exterior cladding is then installed. ProRox SB 971 $^{\mathrm{UK}}$  is compatible with all typical exterior finishes.

#### **Advantages**

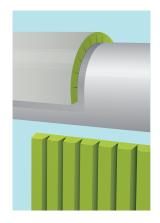
- Suitable for heavy duty applications
- Excellent fit provides optimal performance
- Easy to handle and to install
- High temperature use
- High compressive strength
- Wide range of diameters and insulation thicknesses
- Water repellent to BP standard 172

#### Product properties in accordance with EN 14303: 2009 + A1: 2013

			Perfo	mance	(*)				Norms			
		_ ()										
Thermal conductivity	T <sub>m</sub> (°C)	50	100	150	200	250	300	350	EN ISO 8497			
The mat conductivity	λ (W/mK) 0.040 0.046 0.054 0.064 0.075 0.088 0.106						211130 0477					
Maximum Service Temperature				EN 14707								
Reaction to fire			EN 13501-1									
Nominal density			140	kg/m³					EN 13470			
Water character		< 1 kg/m <sup>2</sup> EN 134							EN 13472			
Water absorption			< 20	kg/m³					BP 172			
Water vapour diffusion resistance			ŀ	ı = 1					EN 14303			
Air Flow Resistivity		> 80 kPa.s/m² EN 29053						EN 29053				
Designation code	MW EN	14303-		EN 14303								

(\*) ProRox SB 971<sup>UK</sup> is manufactured from ProRox PS 971<sup>UK</sup>. Declared performances of ProRox PS 971<sup>UK</sup> are presented in the table above. When calculating the required insulation thickness for  $ProRox SB 971^{UK}$  the larger amount of joints needs to be taken into account.

#### ProRox PSM 971 ALU<sup>UK</sup>



#### Product description & application

ProRox PSM 971 ALU<sup>UK</sup> consists of rigid alu faced slab with factory machined grooves on the inside face to specifically suit large pipe and vessel diameters. The distance between the grooves is calculated to ensure that ProRox PSM9 71 ALU<sup>UK</sup> closely fits the pipe or vessel with all grooves tightly butted together. ProRox PSM 971 ALU<sup>UK</sup> is designed for thermal and acoustic insulation of large diameter pipes, ducts, chimneys and small vessels.

#### Compliance to standards

ProRox PSM 971 ALU<sup>UK</sup> conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40°C to +700°C. With regards to water repellency at higher temperatures, they also comply with BP Engineering Standard 172.

#### Installation guidelines

The method of fixing depends on the type of application and whether single or multiple layers of ProRox PSM 971<sup>UK</sup> are required. Usually the fixing of each layer is achieved with metal tie wires or bands. Typically an exterior cladding is then installed. ProRox PS 971<sup>UK</sup> is compatible with all typical exterior finishes.

#### **Advantages**

- Excellent thermal and acoustic insulation for large diameter pipes and vessels
- Easy to handle and install due to flat-pack supply
- High temperature use
- High compressive strength
- Water repellent to BP standard 172
- Ideal for use where storage space is limited



#### Product properties in accordance with EN 14303

			Performance										
	T (°C)	50	100	150	200	250	300	350					
Thermal conductivity	λ (W/mK)								EN ISO 8497				
Maximum Service Temperature		700 °C											
Reaction to fire		Euroclass A1											
Nominal density		140 kg/m³											
w		< 1 kg/m²							EN 1609				
Water absorption		< 20 kg/m³						BP 172					
Water vapour diffusion resistance		Sd > 200 m							EN 12086				
Air Flow Resistivity (*)		> 60 kPa.s/m²											
Designation code (*)	MW	MW EN 14303-T4-ST(+)700-WS1-MV2											

(\*): performances declared on the basis of test results from slabs of equal density

#### Thermal insulation

ProRox WM 950





#### Product description & application

ProRox WM 950 is a lightly bonded heavy stone wool mat stitched on galvanised wired mesh with galvanised wire. The wired 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. Galvanised steel mesh may deteriorate at (facing) temperatures in excess of 65°C under conditions of high humidity and at temperatures in excess of 350°C (see BS 5970).

Foil faced products and stainless steel options available on request.

#### Compliance to standards

ProRox WM 950 conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40°C to +700°C.

#### Installation guidelines

ProRox WM 950 should have all joints tightly laced together using tie wires. On large surfaces metal banding and/or insulation pins may be required.

Typically an exterior cladding is then installed; this may require a proprietary cladding support system. ProRox WM 950 is compatible with all typical exterior finishes and cladding support systems. Where dissimilar metals such as aluminium and galvanised steel are in direct contact, precautions should be taken to avoid possible electrolytic corrosion as detailed in BS 5970.

#### **Advantages**

- Suitable for heavy duty applications which are exposed to high temperatures and light mechanical loads
- Resistant to high temperatures
- Flexible application
- Available in a wide range of thicknesses standard width 500mm
- In accordance with European specifications for e.g. the biomass sector





					Pe	rform	ance						Norms	
Thermal conductivity	T (°C)	50	100	150	200	250	300	350	400	500	600	640	EN 12667	
Maximum Service Temperature	λ (W/mK)	ι (W/mK)   0.039   0.045   0.053   0.062   0.072   0.084   0.097   0.112   0.146   0.192   0.213												
Reaction to fire		Euroclass A1											EN 13501-1	
Nominal density						30 kg/ı	$m^3$						EN 1602	
Water absorption						: 1 kg/	m³						EN 1609	
Water vapour diffusion resistance						μ = 1							EN 14303	
Air Flow Resistivity					> 4	0 kPa.	s/m²						EN 29053	
Designation code			MV	V EN 1	4303-	T2-ST(	+)640-	-WS1-	CL10				EN 14303	





#### Product description & application

ProRox WM 958<sup>UK</sup> is a lightly bonded heavy stone wool mat stitched on galvanised wired mesh with galvanised wire. The wired 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. Galvanised steel mesh may deteriorate at (facing) temperatures in excess of 65°C under conditions of high humidity and at temperatures in excess of 350°C (see BS 5970).

#### **Product variants:**

ProRox WM 958<sup>UK</sup> can also be supplied water repellent grade (WRG) to meet the BP Engineering Standard 172. Please ask for our ProRox WM 961<sup>UK</sup> Wired Mats. Galvanised mesh and stitching can be substituted by stainless steel.

#### Compliance to standards

ProRox WM 958 $^{\rm uc}$  conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40 $^{\circ}$ C to +700 $^{\circ}$ C.

#### Installation guidelines

ProRox WM 958<sup>UK</sup> should have all joints tightly laced together using tie wires. On large surfaces metal banding and/or insulation pins may be required. Typically an exterior cladding is then installed; this may require a proprietary cladding support system. ProRox WM 958<sup>UK</sup> is compatible with all typical exterior finishes and cladding support systems. Where dissimilar metals such as aluminium and galvanised steel are in direct contact, precautions should be taken to avoid possible electrolytic corrosion as detailed in BS 5970.

#### **Advantages**

- Suitable for heavy duty applications which are exposed to high temperatures and light mechanical loads
- Resistant to high temperatures
- Flexible application
- Available in a wide range of thicknesses -1000 mm or 500 mm widths available





					Pe	rform	ance						Norms	
	T (00)	50	100	150	200	250	300	350	400	500	600	/50		
Thermal conductivity	T <sub>m</sub> (°C)													
	λ (W/mK)	W/mK]   0.041   0.047   0.055   0.065   0.077   0.090   0.105   0.122   0.161   0.207   0.231												
Maximum Service Temperature		650 °C												
Reaction to fire		Euroclass A1												
Nominal density		90 kg/m³												
						: 1 kg/	m²						EN 1609	
Water absorption				< 20 kg	g/m³ (f	or Pro	Rox W	M 961	IJK <b>)</b>				BP 172	
Water vapour diffusion resistance						μ = 1							EN 14303	
Air Flow Resistivity					> 4	0 kPa.	s/m²						EN 29053	
Designation code				MW-E	N 1430	)3-T2-	ST(+)6	50-W	51				EN 14303	



#### Product description & application

ProRox WM 960 is a lightly bonded heavy stone wool mat stitched on galvanised wired mesh with galvanised wire. The wired 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. Galvanised steel mesh may deteriorate at (facing) temperatures in excess of 65°C under conditions of high humidity and at temperatures in excess of 350°C (see BS 5970).

Foil faced products and stainless steel options available on request.

#### Compliance to standards

ProRox WM 960 conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40°C to +700°C.

#### Installation guidelines

ProRox WM 960 should have all joints tightly laced together using tie wires. On large surfaces metal banding and/or insulation pins may be required.

Typically an exterior cladding is then installed; this may require a proprietary cladding support system. ProRox WM 960 is compatible with all typical exterior finishes and cladding support systems. Where dissimilar metals such as aluminium and galvanised steel are in direct contact, precautions should be taken to avoid possible electrolytic corrosion as detailed in BS 5970.

#### **Advantages**

- Suitable for heavy duty applications which are exposed to high temperatures and light mechanical loads
- Resistant to high temperatures
- Flexible application
- Available in a wide range of thicknesses standard width 500mm
- In accordance with European specifications for e.g. the biomass sector





					Pe	rform	ance	Performance												
	T (00)	50	100	150	200	250	300	350	400	500	600	640								
Thermal conductivity	T (°C)																			
-	λ (W/mK)	, [W/mK]   0.039   0.045   0.052   0.059   0.068   0.078   0.089   0.102   0.131   0.167   0.191																		
Maximum Service Temperature		660°C																		
Reaction to fire	Euroclass A1											EN 13501-1								
Nominal density					1	00 kg/	m³						EN 1602							
Water absorption						1 kg/	m³						EN 1609							
Water vapour diffusion resistance						μ = 1							EN 12086t							
Air Flow Resistivity					> 6	0 kPa.	s/m²						EN 29053							
Designation code		MW EN 14303-T2-ST(+)660-WS1-CL10											EN 14303							

#### ProRox WM 970<sup>UK</sup>



#### Product description & application

ProRox WM  $970^{\rm uK}$  is a lightly bonded heavy stone wool mat stitched on galvanised wired mesh with galvanised wire. The wired mat is especially suitable for industrial installations where high temperature and vibration resistance is required. Galvanised steel mesh may deteriorate at (facing) temperatures in excess of  $65^{\rm oC}$  under conditions of high humidity and at temperatures in excess of  $350^{\rm oC}$  (see BS 5970).

#### **Product variants:**

ProRox WM 970 $^{\text{UK}}$  can also be supplied water repellent grade (WRG) to meet the BP Engineering Standard 172. Please ask for our ProRox WM 971 $^{\text{UK}}$  Wired Mats. Galvanised mesh and stitching can be substituted by stainless steel.

#### Compliance to standards

ProRox WM 970 $^{\rm uk}$  conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40 $^{\rm uk}$ C to +700 $^{\rm uk}$ C.

#### Installation guidelines

ProRox WM 970<sup>UK</sup> should have all joints tightly laced together using tie wires. On large surfaces metal banding and/or insulation pins may be required.

Typically an exterior cladding is then installed; this may require a proprietary cladding support system. ProRox WM 958<sup>UK</sup> is compatible with all typical exterior finishes and cladding support systems. Where dissimilar metals such as aluminium and galvanised steel are in direct contact, precautions should be taken to avoid possible electrolytic corrosion as detailed in BS5970.

#### **Advantages**

- Suitable for heavy duty applications which are exposed to high temperatures and high mechanical loads
- Resistant to high temperatures
- Flexible application
- Available in a wide range of thicknesses
- 1000 mm or 500 mm widths available





					Pe	rform	ance						Norms	
	- ()													
Thermal conductivity	T <sub>m</sub> (°C)	50	100	150	200	250	300	350	400	500	600	680	EN 12667	
The mat conductivity	$\lambda$ (W/mK)	(W/mK) 0.040 0.045 0.053 0.061 0.070 0.081 0.093 0.105 0.132 0.167 0.197												
Maximum Service Temperature		680 °C												
Reaction to fire		Euroclass A1												
Nominal density		128 kg/m³												
						: 1 kg/	m²						EN 1609	
Water absorption				< 20 kg	g/m³ (f	or Pro	Rox W	M 971	IJK <b>)</b>				BP 172	
Water vapour diffusion resistance						μ = 1							EN 14303	
Air Flow Resistivity					> 7	0 kPa.	s/m²						EN 29053	
Designation code				MW-E	N 143	03-T2-	ST(+)6	80-W	51				EN 14303	

**Industrial insulation** 

ProRox QM 960<sup>UK</sup>

#### Product description & application

ProRox QM 960 $^{\mathrm{UK}}$  is a lightly bonded stone wool mat without any facings.

#### Compliance to standards

ProRox QM 960<sup>UK</sup> conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40°C to +700°C.

#### Installation guidelines

ProRox QM  $960^{UK}$  is typically used in the manufacture of bespoke insulation blankets and flexible valve and flange jackets. Usually the material is cut to size and the blanket or jacket is filled to the required thickness.

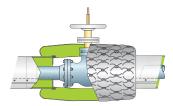
#### **Advantages**

- Excellent thermal and acoustic insulation
- Suitable for use over irregular surfaces
- High temperature use
- Can be used to fabricate purpose made blankets



					Pe	rform	ance						Norms	
Thermal conductivity	T <sub>m</sub> (°C)	T <sub>m</sub> (°C) 50 100 150 200 250 300 350 400 500 600 650												
The mat conductivity	$\lambda$ (W/mK)	. (W/mK)   0.041   0.047   0.055   0.065   0.077   0.090   0.105   0.122   0.161   0.207   0.231												
Maximum Service Temperature		650 °C												
Reaction to fire	Euroclass A1												EN 13501-1	
Nominal density	90 kg/m³												EN 1602	
Water absorption			< 2	0 kg/m		: 1 kg/ ProRo:		61 (AL	_U) <sup>UK</sup> )				EN 1609 BP 172	
Water vapour diffusion resistance						μ = 1							EN 14303	
Air Flow Resistivity					> 4	0 kPa.	s/m²						EN 29053	
Designation code	MW	MW EN 14303-T2-ST(+)650-WS1 MW-EN 14303-T2-ST(+)650-WS1-MV2 (for alu-foil faced product)											EN 14303	

#### ProRox QM 970<sup>UK</sup>



#### Product description & application

ProRox QM 970 $^{\text{UK}}$  is a lightly bonded high density stone wool mat without any facings.

#### Compliance to standards

ProRox QM 970 $^{\rm uc}$  conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40 $^{\rm uc}$ C to +700 $^{\rm uc}$ C.

#### Installation guidelines

ProRox QM  $970^{\text{UK}}$  is typically used in the manufacture of bespoke insulation blankets and flexible valve and flange jackets for higher temperatures. Usually the material is cut to size and the blanket or jacket is filled to the required thickness.

#### **Advantages**

- Excellent thermal and acoustic insulation
- Suitable for use over irregular surfaces
- High temperature use
- Can be used to fabricate purpose made blankets



					Pe	rform	ance						Norms
	T_ (°C)	T (°C  50 100 150 200 250 300 350 400 500 600 680											
Thermal conductivity	λ (W/mK)	0.040	0.045	0.053	0.061	0.070	0.081	0.093		0.132	0.167		EN 12667
Maximum Service Temperature		680 °C										EN 14706	
Reaction to fire		Euroclass A1										EN 13501-1	
Nominal density		128 kg/m³											EN 1602
Water absorption					•	< 1 kg/	m²						EN 1609
Water vapour diffusion resistance						μ = 1							EN 14303
Air Flow Resistivity		> 70 kPa.s/m²											EN 29053
Designation code				MW-E	N 143	03-T2-	ST(+)6	80-WS	51				EN 14303

ProRox SL 920<sup>UK</sup>



#### Product description & application

ProRox SL  $920^{\text{uK}}$  is a strong but flexible stone wool board for the thermal insulation of horizontal and vertical surfaces.

#### Product variants on request:

ProRox SL 920<sup>UK</sup>can also be supplied water repellent grade to meet the BP Engineering Standard 172. Please ask for our ProRox SL 921<sup>UK</sup> Slabs. Reinforced aluminium foil facing is also available on request.

#### Compliance to standards

ProRox SL 920 $^{\rm UK}$  conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40 $^{\circ}$ C to +700 $^{\circ}$ C.

#### Installation guidelines

Typically used for lower temperature applications such as storage tanks and ductwork. ProRox SL 920<sup>UK</sup> should be securely fixed in position with all joints tightly butted together. Additional securement, if needed, can take the shape of self-adhesive insulation pins. Typically an exterior cladding is then installed. ProRox SL 920<sup>UK</sup> is compatible with all typical exterior finishes.

#### **Advantages**

- Flexible application
- Available in a wide range of thicknesses
- Easy to cut and handle





			Perform	nance				Norms	
Thermal conductivity	T <sub>m</sub> (°C)	50	100	150	200	250	300	EN 12667	
	λ (W/mK) 0.042 0.054 0.069 0.086 0.106 0.131								
Maximum Service Temperature	In case of aluminium	facing the	300 outer foil	_	ure should	l be limite	d to 80 °C	EN 14706	
Reaction to fire		Euroclass A1 EN							
Nominal density	45 kg/m³							EN 1602	
Water absorption		< 20 kg,	< 1 kg /m³ (for P	J/m² roRox SL	921 <sup>uk</sup> )			EN 1609 BP 172	
Water vapour diffusion resistance	Ş	Sd > 200 n	μ = n (for Alu-		product)			EN 14303 EN 12086	
Air Flow Resistivity	> 10 kPa.s/m²								
Designation code	MW EN 14303	MW EN 14303-T4-ST(+)300-WS1 MW EN 14303-T4-ST(+)300-WS1-MV2 (for Alu-foil faced product)							



#### Product description & application

ProRox SL 930<sup>UK</sup> is a semi-rigid board for the thermal and acoustic insulation of horizontal and vertical surfaces where a stable insulation product is required. For example, tank walls or acoustic panels.

#### Product variants on request:

ProRox SL 930<sup>UK</sup> can also be supplied water repellent grade (WRG) to meet the BP Engineering Standard 172. Please ask for our ProRox SL 931<sup>UK</sup> Slabs. Reinforced aluminium foil facing is also available on request.

#### Compliance to standards

ProRox SL 930 $^{\rm UK}$  conforms to BS EN 14303:2009. "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40 $^{\circ}$ C to +700 $^{\circ}$ C.

#### Installation guidelines

Typically used for low to medium temperature applications such as storage tanks and ductwork where a more robust insulation is required. ProRox SL 920<sup>UK</sup> should be securely fixed in position with all joints tightly butted together. Additional securement, if needed, can take the shape of self-adhesive insulation pins. Typically an exterior cladding is then installed. ProRox SL 930<sup>UK</sup> is compatible with all typical exterior finishes.

#### **Advantages**

- Available in a wide range of thicknesses
- Easy to cut and handle





				Performa	nce				Norms	
	T_ (°C)	50	100	150	200	250	300	350		
Thermal conductivity	λ (W/mK)	0.040	0.049	0.059	0.070	0.085	0.103	0.122	EN 12667	
Maximum Service Temperature	In case of alur	minium fa	cing the o	350 °C uter foil te		re should	be limited	to 80 °C	EN 14706	
Reaction to fire				Euroclas	s A1				EN 13501-1	
Nominal density		60 kg/m³								
Water absorption			< 20 kg/m	< 1 kg/r <sup>3</sup> (for Pro		31 <sup>UK</sup> )			EN 1609 BP 172	
Water vapour diffusion resistance		Sd	> 200 m (	μ = 1 for Alu-fo	il faced p	roduct)			EN 14303 EN 12086	
Air Flow Resistivity		> 20 kPa.s/m²								
Designation code	MW EN	I 14303-T	MW EN 14 4-ST(+)35				ed produ	ct)	EN 14303	

ProRox SL 950<sup>UK</sup>



#### Product description & application

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

#### Product variants on request:

 $ProRox SL 950^{UK}$  can also be supplied water repellent grade (WRG) to meet the BP Engineering Standard 172. Please ask for our ProRox SL  $951^{UK}$  Slabs. Reinforced aluminium foil facing is also available on request.

#### Compliance to standards

ProRox SL 950 $^{\rm UK}$  conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40°C to +700°C.

#### Installation guidelines

Typically used for medium temperature applications such as process tanks and vessels where a more robust insulation is required. ProRox SL  $950^{UK}$  should be securely fixed in position with all joints tightly butted together. Additional securement, if needed, can take the shape of self-adhesive insulation pins. Typically an exterior cladding is then installed. ProRox SL 950<sup>UK</sup> is compatible with all typical exterior finishes.

#### **Advantages**

- Suitable for intermediate temperatures
- Retains shape
- Available in a wide range of thicknesses





		Performance										Norms	
	T <sub>m</sub> (°C)	50	100	150	200	250	300	350	400	500	600	640	EN 40//F
Thermal conductivity	λ (W/mK)	0.039	0.045	0.053	0.062	0.073	0.085	0.100	0.117	0.157	0.205	0.226	EN 12667
Maximum Service Temperature	In case of	alumir	nium fa	icing th	ne oute	640 ° er foil t	_	ature s	should	be lim	ited to	80 °C	EN 14706
Reaction to fire					Eu	roclas	s A1						EN 13501-1
Nominal density					:	80 kg/ı	m³						EN 1602
Water absorption				< 20 k		1 kg/ for Pro		L 951 <sup>u</sup>	к)				EN 1609 BP 172
Water vapour diffusion resistance			Sd	> 200	m (for	μ = 1 · Alu-fo	oil face	ed prod	duct)				EN 14303 EN 12086
Air Flow Resistivity					> 3	0 kPa.	s/m²						EN 29053
Designation code	MV	/ EN 14	4303-T			03-T4- WS1-N				ed pro	oduct)		EN 14303





#### Product description & application

ProRox SL 960<sup>UK</sup> is a strong and rigid slab and is especially suitable for the thermal and acoustic insulation of constructions up to intermediate temperatures.

#### **Product variants:**

ProRox SL 960<sup>UK</sup>can also be supplied water repellent grade (WRG) to meet the BP Engineering Standard 172. Please ask for our ProRox SL 961<sup>UK</sup> Slabs. Reinforced aluminium foil facing is also available

#### Compliance to standards

ProRox SL 960<sup>UK</sup> conforms to BS EN 14303:2009. Thermal insulation products for building equipment and industrial installations. Factory made mineral wool products (MW). Specification and can be used to satisfy BS 5422. Method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40°C to +700°C.

#### Installation guidelines

Typically used for medium to high temperature applications such as process tanks and high temperature ductwork where a more robust insulation is required. ProRox SL  $960^{\text{UK}}$  should be securely fixed in position with all joints tightly butted together. Additional securement, if needed, can take the shape of self-adhesive insulation pins. Typically an exterior cladding is then installed. ProRox SL  $960^{\text{UK}}$  is compatible with all typical exterior finishes.

#### **Advantages**

- Excellent thermal and acoustic insulation
- Resistant to high temperatures





		Performance									Norms
Thermal conductivity	T <sub>m</sub> (°C)	50	100	150	200	250	300	350	400	500	EN 12667
The mat conductivity	λ (W/mK)	0.039	0.045	0.052	0.060	0.071	0.081	0.094	0.107	0.140	LIN 12007
Maximum Service Temperature	In case of al	uminiur	n facing	the out	660°0 er foil te		ure sho	uld be l	imited t	o 80 °C	EN 14706
Reaction to fire				E	uroclas	s A1					EN 13501-1
Nominal density					100 kg/	m³					EN 1602
Water absorption					< 1 kg/r						EN 1609
			< 20	kg/m³	for Pro	Rox SL	961 <sup>UK</sup> )				BP 172
W-1					μ = 1						EN 14303
Water vapour diffusion resistance			Sd > 20	00 m (fo	r Alu-fo	il faced	produc	:t)			EN 12086
Air Flow Resistivity				> !	50 kPa.:	s/m²					EN 29053
Designation code	MW E	EN 1430		EN 143 Γ(+)500-				. faced p	oroduct		EN 14303

ProRox SL 980<sup>UK</sup>

PROROX

#### Product description & application

ProRox SL 980<sup>UK</sup> is a strong and rigid stone wool slab, for the thermal and acoustic insulation of constructions where higher demands are made on the temperature resistance and mechanical loads of the insulation.

#### Product variants on request:

ProRox SL 980<sup>UK</sup> can also be supplied water repellent grade to meet the BP Engineering Standard 172. Please ask for our ProRox SL 981<sup>UK</sup> Slabs. Reinforced aluminium foil facing is also available on request.

#### Compliance to standards

ProRox SL 980 $^{\rm UK}$  conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40 $^{\circ}$ C to +700 $^{\circ}$ C.

#### Installation guidelines

Typically used high temperature applications such as tank roofs and high temperature ductwork where a more robust insulation is required. ProRox SL 960<sup>UK</sup> should be securely fixed in position with all joints tightly butted together. Additional securement, if needed, can take the shape of self-adhesive insulation pins. Typically an exterior cladding is then installed. ProRox SL 980<sup>UK</sup> is compatible with all typical exterior finishes.

#### **Advantages**

- Resistant to foot traffic (under suitable conditions)
- Available in a wide range of thicknesses





		Performance										Norms	
	T (00)	F0	400	450	000	050	000	050	/00	500	/00	E00	
Thermal conductivity	T <sub>m</sub> (°C)	50	100	150	200	250	300	350	400	500	600	700	EN 12667
The mat conductivity	$\lambda$ (W/mK)	0.040	0.044	0.050	0.057	0.064	0.073	0.084	0.094	0.119	0.148	0.182	214 12007
Maximum Service Temperature	In case of	alumir	nium fa	icing th	ne oute	700 ° er foil t	_	ature s	should	be lim	ited to	80 °C	EN 14706
Reaction to fire					Εu	roclas	s A1						EN 13501-1
Nominal density					1	40 kg/	m³						EN 1602
w:						< 1 kg/	m²						EN 1609
Water absorption				< 20 k	.g/m³ (	for Pro	Rox S	L 981 <sup>u</sup>	K)				BP 172
						μ = 1							EN 14303
Water vapour diffusion resistance			Sd	> 200	m (for	· Alu-fo	oil face	ed prod	duct)				EN 12086
Air Flow Resistivity					> 6	0 kPa.	s/m²						EN 29053
Designation code	MW	/ EN 1	4303-7			03-T4- WS1-N				ced pro	oduct)		EN 14303

ProRox GR 900<sup>UK</sup> Loose Fill



#### Product description & application

ProRox GR  $900^{UK}$  is lightly bonded, impregnated stone wool. This product is especially suitable for cold boxes and the thermal and acoustic insulation of voids and joints.

#### **Compliance to standards**

ProRox GR 900 $^{\rm UK}$  conforms to BS EN 14303:2009: "Thermal insulation products for building equipment and industrial installations". They also satisfy the requirements as set by BS 5422: method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40 $^{\circ}$ C to +700 $^{\circ}$ C. Is also approved for use in cold boxes at cryogenic temperatures.

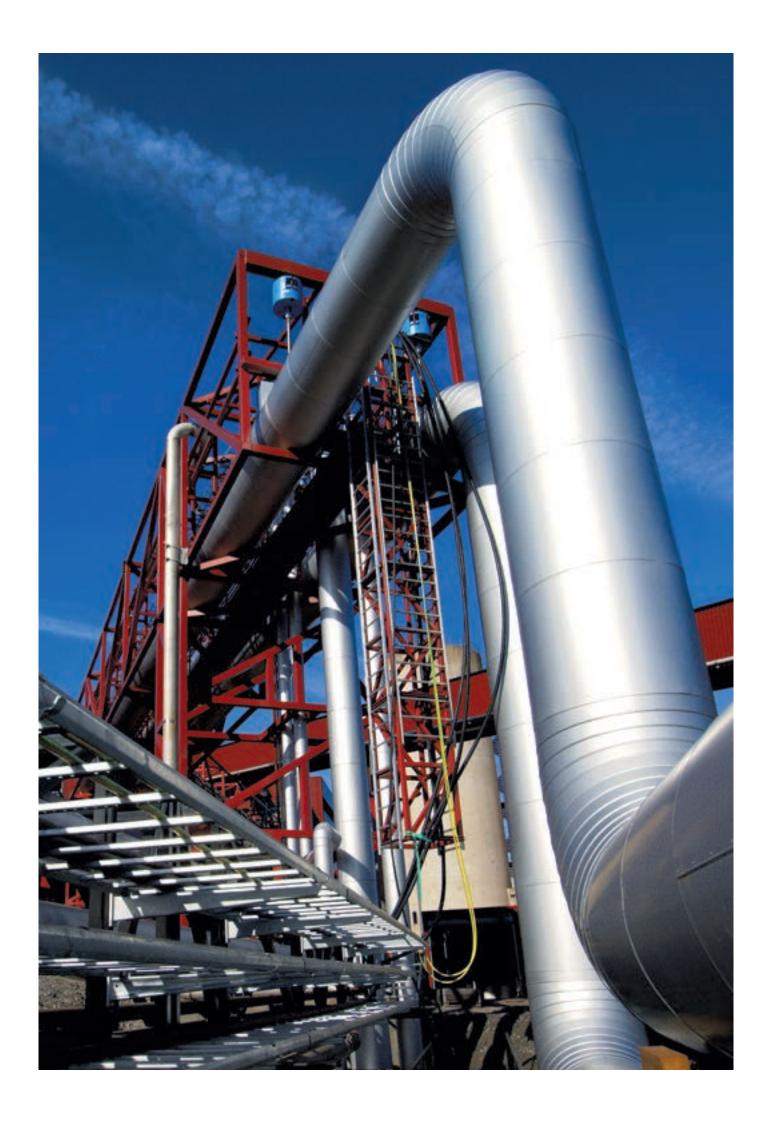
#### Installation guidelines

ProRox GR 900 $^{\rm UK}$  is mainly used in the specialist application of cold boxes, where it is simply poured into place. It can also be used to pack irregular voids where the cutting of materials is prohibitive. It is typically installed by hand packing.

#### **Advantages**

- Ease of use
- Flexible application
- Used for cold box insulation

	Performance	Norms
Thermal conductivity	λ <sub>10</sub> = 0.038 (W/mK)	EN 12667
Reacton to fire	EuroClass A1	EN 13501-1



#### ProRox PS 661<sup>UK</sup>



#### Product description & application

ProRox PS 661<sup>UK</sup> is a pre-formed high density stone wool pipe section. The sections are supplied split and hinged for easy snap-on assembly. ProRox PS 661<sup>UK</sup>can be used in accordance with API 520, 521 & 2000 standards to provide hydrocarbon passive fire protection. The products will also provide a high degree of thermal and acoustic insulation.

#### **Compliance to standards**

ProRox PS 661<sup>UK</sup> can be used in accordance with API 520, 521 & 2000 standards to provide hydrocarbon passive fire protection. They also comply with BP Engineering Standard 172 with regards to water repellency at higher temperatures.

#### Installation guidelines

The correct thickness of material is determined by API 520. Each layer is securely banded in place using stainless steel bands. The whole to be further supported by stainless steel cladding (or similar) with all joints screwed/riveted. Finally stainless steel banding is used to complete the installation.

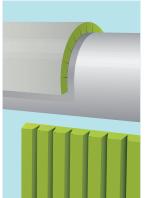
#### **Advantages**

- Thermal, acoustic and hydrocarbon fire insulation in one
- Easy to install
- Removable for inspection



		Performance										
	T_ (°C)	T <sub>m</sub> [°C] 50 100 150 200 250 300 350										
Thermal conductivity	λ (W/mK)	λ (W/mK) 0.040 0.046 0.054 0.064 0.075 0.088 0.106										
Maximum Service Temperature		680 °C										
Reaction to fire		Euroclass A1 <sub>L</sub>										
Nominal density			150	kg/m³					EN 13470			
Water absorption				kg/m² kg/m³					EN 13472 BP 172			
Water vapour diffusion resistance		μ = 1										
Air Flow Resistivity		EN 29053										
Designation code	MW EN 1	4303-	T9(T8	f D <sub>o</sub> <15	50)-STI	(+)680-	WS1		EN 14303			

ProRox PSM 660 ALU<sup>UK</sup>



#### Product description & application

ProRox PSM 660 ALU<sup>UK</sup> consists of rigid alu faced slab having grooves factory machined on the inside face to specifically suit large pipe and vessel diameters.

ProRox PSM 660 ALU<sup>UK</sup> can be used in accordance with API 520, 521 & 2000 standards to provide hydrocarbon passive fire protection. The products will also provide a high degree of thermal and acoustic insulation.

#### Compliance to standards

ProRox PSM 660 ALU  $^{\rm UK}$  can be used in accordance with API 520, 521 & 2000 standards to provide hydrocarbon passive fire protection.

#### Installation guidelines

The correct thickness of material is determined by API 520. Each layer is securely banded in place using stainless steel bands. The whole to be further supported by stainless steel cladding (or similar) with all joints screwed/riveted. Finally stainless steel banding is used to complete the installation.

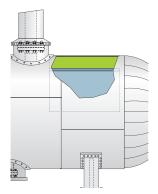
#### **Advantages**

- Thermal, acoustic and hydrocarbon fire insulation in one
- Easy to install
- Removable for inspection



			Perfo	rman	:e				Norms							
	T_ (°C)	50	100	150	200	250	300	350	EN ISO 8497							
Thermal conductivity (*)	λ (W/mK)	λ (W/mK) 0.041 0.048 0.057 0.068 0.081 0.096 0.114														
Maximum Service Temperature		700 °C														
Reaction to fire		Euroclass A1									Euroclass A1					EN 13501-1
Nominal density			150	kg/m³					EN 1602							
Water absorption			< 1	kg/m²					EN 1609							
Mater consum difference manietamen			μ	ı = 1					EN 14303							
Water vapour diffusion resistance	Sd >	Sd > 200 m (for Alu-foil faced product)														
Air Flow Resistivity (*)		> 60 kPa.s/m²										> 60 kPa.s/m² EN				EN 29053
Designation code (*)	MW I	EN 14	303-T4	-ST(+):	700-WS	51-MV2	2		EN 14303							

<sup>(\*):</sup> performances declared on the basis of test results from slabs in equal density



#### Product description & application

ProRox SL  $660^{\text{UK}}$  is a strong and rigid stone wool slab. ProRox SL  $660^{\text{UK}}$  can be used to meet the requirements of API 520, 521 & 2000 standard to provide hydrocarbon passive fire protection. The products will also provide a high degree of thermal and acoustic insulation.

#### Compliance to standards

ProRox SL 660<sup>UK</sup>can be used in accordance with API 520, 521 & 2000 standards to provide hydrocarbon passive fire protection.

#### Installation guidelines

The correct thickness of material is determined by API 520. Each layer is securely banded in place using stainless steel bands. The whole to be further supported by stainless steel cladding (or similar) with all joints screwed/riveted. Finally stainless steel banding is used to complete the installation.

#### **Advantages**

- Thermal, acoustic and hydrocarbon fire insulation in one
- Easy to install
- Removable for inspection



					Pe	rform	ance						Norms
Thermal conductivity	T <sub>m</sub> (°C)	T <sub>m</sub> (°C) 50 100 150 200 250 300 350 400 500 600 700											EN 12667
The mat conductivity	$\lambda$ (W/mK)	W/mK) 0.040 0.044 0.050 0.057 0.064 0.073 0.084 0.094 0.119 0.148 0.182											LIN 12007
Maximum Service Temperature						700 °	C						EN 14706
Reaction to fire		Euroclass A1											EN 13501-1
Nominal density		150 kg/m³											EN 1602
Water absorption					•	: 1 kg/	m²						EN 1609
W.A.						1							EN 14303
Water vapour diffusion resistance						μ = 1							EN 12086
Air Flow Resistivity		> 60 kPa.s/m²										EN 29053	
Designation code				MW EI	N 1430	3-T4(-	ST(+)7	700-W	51				EN 14303

#### ProRox WM 660 SW<sup>UK</sup>



#### Product description & application

ProRox WM 660 SW<sup>UK</sup> is a lightly bonded heavy stone wool mat stitched on stainless steel wired mesh with stainless steel wire. ProRox WM 660 SW<sup>UK</sup> can be used in accordance with API 520, 521 & 2000 standards to provide hydrocarbon passive fire protection. The products will also provide a high degree of thermal and acoustic insulation.

#### Compliance to standards

ProRox WM 660 SW $^{\rm UK}$  can be used in accordance with API 520, 521 & 2000 standards to provide hydrocarbon passive fire protection.

#### Installation guidelines

The correct thickness of material is determined by API 520. Each layer is securely banded in place using stainless steel bands. The whole to be further supported by stainless steel cladding (or similar) with all joints screwed/riveted. Finally stainless steel banding is used to complete the installation.

#### **Advantages**

- Thermal, acoustic and hydrocarbon fire insulation in one
- Easy to install
- Removable for inspection



		Performance											Norms	
Thermal conductivity	T <sub>m</sub> (°C)	T <sub>m</sub> (°C) 50 100 150 200 250 300 350 400 500 600 650 700											EN 12667	
The mat conductivity	$\lambda$ (W/mK)	(W/mK) 0.040 0.044 0.049 0.056 0.064 0.074 0.085 0.097 0.124 0.154 0.172 0.190										LIN 12007		
Maximum Service Temperature						70	0 °C							EN 14706
Reaction to fire		Euroclass A1									EN 13501-1			
Nominal density						150	kg/m³							EN 1602
Water absorption						< 1	kg/m²							EN 1609
Water vapour diffusion resistance						μ	= 1							EN 14303
Air Flow Resistivity		> 110 kPa.s/m²									EN 29053			
Designation code		MW EN 14303-T2-ST(+)700-WS1								EN 14303				

#### **ProRox GRP 1000**



\*GRP: Glass fibre Reinforced polyester

Prorox GRP 1010 (Resin) is available on request

#### Product description & application

Achieving the best insulation system for your application is not easy. Besides the right choice and implementation of the insulation, the insulation protection system also plays an important role. Specific uses call for specific solutions. Certain processes require a fully watertight and closed finish. Strong and easy to clean, with great durability and chemical resistance. An insulation protection that results in a high amount of operational safety, low maintenance costs and limited energy costs. ROCKWOOL Technical Insulation offers an innovative protection system for ROCKWOOL ProRox insulation: ProRox GRP 1000.

ProRox GRP 1000 is a fiberglass reinforced polyester mat positioned between two sheets of film. The material contains resins, fiberglass and special fillers and is ready to use. Unprocessed it is soft and malleable. In this state, ProRox GRP 1000 can be cut or trimmed into any shape which makes it easy to apply to the insulation. The polyester subsequently cures under the influence of ultraviolet (UV) light. After curing, ProRox GRP 1000 is absolutely watertight and is able to give optimal mechanical protection.

#### **Advantages**

The ProRox GRP 1000 system has important advantages that enhances the quality of your work.

- Great durability: ProRox GRP 1000 forms a seamless connection that offers a watertight protection to the ROCKWOOL insulation. It minimizes the damaging effects of the weather (wind, rain, seawater, etc.) or general wear and tear. It is chemical-resistant and withstands mechanical stresses (i.e. can be walked upon with a suitable substrate).
- Easy to clean: ProRox GRP 1000 can withstand spray-cleaning. Cleaning with water is possible without damaging the insulation.
- Low start-up costs: processing and installation takes place on location. This makes investments for the pre-fabrication of the insulation protection unnecessary.
- Flexible use: cold and hot insulation, underground and above ground cables and pipes, on and offshore. ProRox GRP 1000 moulds itself to every technical application.



#### Cladding

#### Packaging and storage

ProRox GRP 1000 is supplied in rolls of 10 m in length and 1 m in width, packed in boxes. Each roll (including packaging) weighs approx. 37 kg. The storage life is 6 months (after date of delivery). The contents measure 10 m² per roll. Always store ProRox GRP 1000 in the original packaging in an ambient temperature of a maximum of 25°C. Avoid direct contact with sunlight during use.

#### **Ancilliaries**

As accessories, UV-lamps and safety goggles are available upon request. Besides these, we also offer ProRox GRP 1010, which is a UV-curing resin. This resin enhances the adhesion between already cured and newly applied uncured ProRox GRP 1000. Therefore, it is used in case of repairs or in order to continue working on already cured ProRox GRP 1000.

#### Curing

The curing will depend upon the ambient temperature and the intensity of the UV-light. Under the influence of sunlight or 400 W UV-lamps, placed at a distance of 0.5 meters, ProRox GRP 1000 cures in 30 minutes [T  $20^{\circ}\text{C} / \text{RH} 50\%$ ].

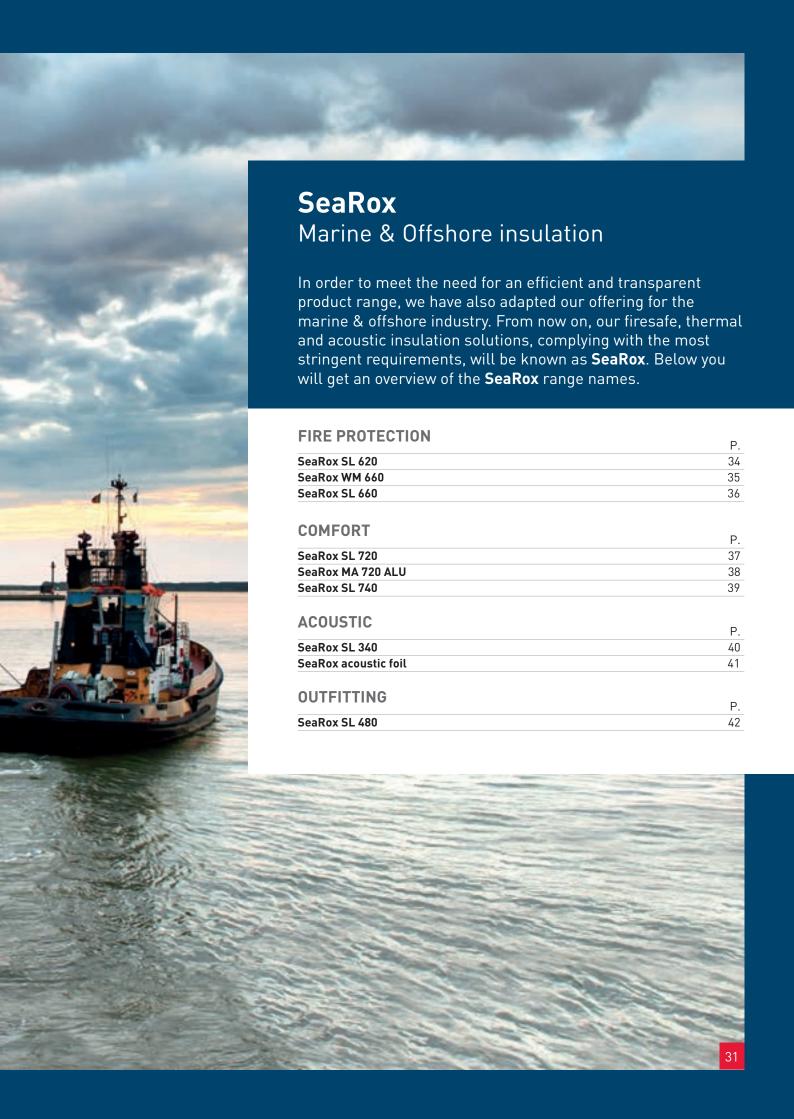
#### Technical guidelines

ProRox GRP 1000 is a fiberglass-reinforced 1-component polyester (GRP) that in un-processed state is soft and malleable. The material contains resins, fiberglass and special fillers and is ready to use. ProRox GRP 1000 can be cut or trimmed into any shape which makes it easy to apply to the insulation. The material cures under the influence of ultraviolet light. Once cured, ProRox GRP 1000 has an extremely high level of hardness and mechanical strength compared to conventional polyester. In addition, ProRox GRP 1000 is impermeable and resistant to a large number of chemicals. The fire properties are unique in its class.

#### **Exposure to sunlight**

Applying a coating/paint may be required to improve the cosmetic appearance and/or the durability of ProRox GRP 1000. This is especially relevant if ProRox GRP 1000 is exposed to direct sunlight with a high UV intensity which is common for warm, sub-tropical and tropical climates.





## Marine & Offshore insulation

#### **Application selector** Fire Insulation Comfort Acoustic Outfitting Insulation Insulation A Class **H Class PRODUCT NAME** SeaRox SL 620 SeaRox SL 660 SeaRox SL 720 SeaRox SL 740 SeaRox SL 340 SeaRox SL 480 SeaRox MA 720 ALU SeaRox WM 660 SeaRox Acoustic Foil

Note:  $ProRox\ PS\ 971^{UK}$ ,  $ProRox\ WM\ 958-970^{UK}$  and  $ProRox\ SL\ 920-980^{UK}$  are approved for Marine & Offshore comfort applications. Please contact ROCKWOOL Technical Insulation for more details.



SeaRox SL 620 Slab



#### **Application**

SeaRox SL 620 is a rigid slab made of stone wool specially designed for A-class fire insulation of steel bulkheads and decks for marine applications.

#### Installation guidelines

The installation guidelines are available at www.rockwool-rti.com. In SeaRox section you will find also the brochure "Technical Guidelines" (see section "Drawings & Downloads").

#### **Advantages**

- Thermal, acoustic and fire insulation in one
- New A-class fire rated solutions tested according to IMO 2010 FTP Code
- Certified for marine & offshore applications



	Performance	Norms
Thermal conductivity	λ <sub>10</sub> = 0,035 (W/mK)	EN 12667
Max. Application Temperature	650°C in case of aluminium facing the outer foil temperature should be limited to 80°C	-
Fire classification	Non-combustible Approved for A-Class constructions Low surface flame spread (Alu-foil, glass cloth)	IMO FTP-code
Water absorption (short term)	<1 kg/m²	EN 1609
Sound absorption	$lpha_{_{ m w}}$ = 0,90 Thickness 50 mm	ISO 354 ISO 11 654
Nominal density	100-115 kg/m³	-
Facings (on request)	Reinforced alu foil or glass cloth	IMO FTP-code (low flame spread)

SeaRox WM 660 is a compressed mat made of stone wool. One side is faced with 1" galvanised wire mesh stiched to the mat with galvanished wire. The product is specially developed and used for H-class fire protection of bulkheads, decks and firewalls onboard offshore platforms.

#### Installation guidelines

The installation guidelines are available at www.rockwool-rti.com. In SeaRox section you will find also the brochure "Technical Guidelines" (see section "Drawings & Downloads").

#### **Advantages**

- Thermal, acoustic and fire insulation in one
- Flexible and fast installation
- Wire mesh included as standard as final layer. No extra installation of a wire mesh for H-constructions, (the wire mesh is standard included in the product).
- Certified in hydrocarbon fire rated constructions for offshore applications

#### **Product properties**



	Performance	Norms
Thermal conductivity	$\lambda_{10} = 0.035$ (W/mK), $\lambda_{100} = 0.043$ (W/mK), $\lambda_{300} = 0.075$ (W/mK)	EN 12667
Max. Application Temperature	Wool: 750°C (in case of aluminium facing the outer foil temperature should be limited to 80 °C)	-
Fire classification	Non-combustible Approved for H-Class constructions Low flame spread properties	IMO FTP-code
Water absorption (short term)	<1 kg/m²	EN 1609 AC
Sound absorption (directly mounted)	$\alpha_{\rm w}$ = 0,90 Thickness 2x50 mm	ISO 354 ISO 11 654
Compressive strength	-	EN 826
Nominal density	150 kg/m³	EN 1602 / IMO
Facings (on request)	Reinforced alu foil	IMO FTP-code (low flame spread)

Marine & Offshore insulation

SeaRox SL 660 Slab



#### **Application**

SeaRox SL 660 is a hard and rigid slab made of stone wool specially designed for H-class fire insulation of decks, bulkheads and firewalls on offshore platforms and structures.

#### Installation guidelines

The installation guidelines are available at www.rockwool-rti.com. In SeaRox section you will find also the brochure "Technical Guidelines" (see section "Drawings & Downloads").

#### **Advantages**

- Thermal, acoustic and fire insulation in one
- Certified in hydrocarbon fire rated constructions for offshore applications



	Performance	Norms
Thermal conductivity	$\lambda_{10} = 0.038 \text{ (W/mK)}$	EN 12667
Max. Application Temperature	750°C in case of aluminium facing the outer foil temperature should be limited to 80°C	-
Fire classification	Non-combustible Approved for H-Class constructions Low surface flame spread (Alu foil)	IMO FTP-code
Water absorption	< 1 kg/m²	EN 1609
Sound absorption (short term)	$lpha_{ m w}$ = 0,75 Thickness 50 mm	ISO 354 ISO 11 654
Nominal density	150 kg/m³	-
Facings (on request)	Reinforced alu foil	IMO FTP-code (low flame spread



SeaRox SL 720 is a soft, lightweight slab made of stone wool. The product can be used for comfort insulation of bulkhead and decks onboard ships and offshore platforms installations.

#### Installation guidelines

The installation guidelines are available at www.rockwool-rti.com. In SeaRox section you will find also the brochure "Technical Guidelines" (see section "Drawings & Downloads").

#### **Advantages**

- Thermal insulation
- Low weight solution
- Certified for marine & offshore applications



	Performance	Norms
The second conductivity	) 002/(W/-W) ) 00/F(W/-W)	EN 10//7
Thermal conductivity	$\lambda_{10} = 0.036$ (W/mK), $\lambda_{50} = 0.045$ (W/mK)	EN 12667
Max. Application Temperature	250°C In case of aluminium facing the outer foil temperature should be limited to 80°C	-
Fire classification	Non-combustible Low flame spread properties	IMO FTP-code
Water absorption (short term)	<1 kg/m²	EN 1609 AC
Sound absorption (directly mounted)	$lpha_{_{w}}$ = 0,75 Thickness 50 mm	ISO 354 ISO 11 654
Compressive strength	-	EN 826
Nominal density	32 kg/m³	EN 1602 / IMO
Facings (on request)	Reinforced alu foil	IMO FTP-code (low flame spread)



SeaRox MA 720 ALU is a highly compressed soft, lightweight roll made of stone wool. The product can be used for comfort insulation of bulkhead and decks onboard ships and platforms installations.

#### Installation guidelines

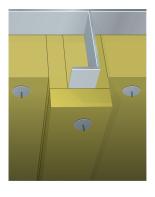
The installation guidelines are available at www.rockwool-rti.com. In SeaRox section you will find also the brochure "Technical Guidelines" (see section "Drawings & Downloads").

#### **Advantages**

- As standard delivered with reinforced aluminium foil on one side
- Thermal insulation
- Flexible low weight roll secures easy and fast installation
- Certified for marine & offshore applications



	Performance	Norms
Thermal conductivity	$\lambda_{10} = 0.036 \text{ (W/mK)}, \ \lambda_{50} = 0.045 \text{ (W/mK)}$	EN 12667
Max. Application Temperature	250°C Outer foil temperature should be limited to 80°C	-
Fire classification	Non-combustible Low flame spread properties	IMO FTP-code
Water absorption (short term)	<1 kg/m²	EN 1609 AC
Sound absorption (directly mounted)	-	ISO 354 ISO 11 654
Compressive strength	-	EN 826
Nominal density	32 kg/m³	EN 1602 / IMO
Facings (on request)	Reinforced alu foil	IMO FTP-code (low flame spread)



SeaRox SL 740 is a semi-rigid slab made of stone wool. The slab is suitable for the thermal and acoustic insulation of horizontal and vertical walls.

#### Installation guidelines

The installation guidelines are available at www.rockwool-rti.com. In SeaRox section you will find also the brochure "Technical Guidelines" (see section "Drawings & Downloads").

#### **Advantages**

- Thermal and acoustic insulation in one
- Certified for marine & offshore applications



	Performance	Norms
Thermal conductivity	$\lambda_{10} = 0.034 \text{ (W/mK)}, \lambda_{50} = 0.039 \text{ (W/mK)}$	EN 12667
Max. Application Temperature	250°C In case of aluminium facing the outer foil temperature should be limited to 80°C	-
Fire classification	Non-combustible Approved for A-Class Constructions Low flame spread (Alu foil, glass cloth)	IMO FTP-code
Water absorption (short term)	<1 kg/m²	EN 1609
Sound absorption	$lpha_{_{w}}$ = 0,75 Thickness 50 mm	ISO 354 ISO 11 654
Nominal density	45 kg/m³	-
Facings (on request)	Reinforced alu foil	IMO FTP-code (low flame spread)

SeaRox SL 340 Slab



#### **Application**

SeaRox SL 340 is a semi-rigid slab made of stone wool. The product is mainly made for sound insulation and offers a perfect combination as comfort and high noise reduction.

#### Installation guidelines

The installation guidelines are available at www.rockwool-rti.com. In SeaRox section you will find also the brochure "Technical Guidelines" (see section "Drawings & Downloads").

#### **Advantages**

- Thermal and acoustic insulation in one
- Easy handling and installation
- Certified for marine & offshore applications



	Performance	Norms
Thermal conductivity	λ <sub>10</sub> = 0,034 (W/mK)	EN 12667
Max. Application Temperature	250°C In case of aluminium facing the outer foil temperature should be limited to 80°C	-
Fire classification	Non-combustible Low flame spread properties	IMO FTP-code
Water absorption (short term)	<1 kg/m²	EN 1609
Sound absorption (directly mounted)	$\alpha_{\rm w}$ = 0,90 $\alpha_{\rm w}$ = 0,95 Thickness 50 mm Thickness 2x50 mm	ISO 354 ISO 11 654
Compressive strength	-	EN 826
Nominal density	80 kg/m³	EN 1602 / IMO
Facings (on request)	Reinforced alu foil or glass tissue	IMO FTP-code (low flame spread)



SeaRox acoustic foil

- 1 Steel plate 2 SeaRox insulation
- 3 SeaRox Acoustic Foil
- 4 Perforated steel plate

#### **Application**

SeaRox Acoustic foil forms part of the optimal system for sound absorption specially designed for engine rooms and similar applications. By using SeaRox Acoustic foil the noise absorption properties of the ROCKWOOL insulation material will remain.

#### Installation guidelines

The installation guidelines are available at www.rockwool-rti.com. In SeaRox section you will find also the brochure "Technical Guidelines" (see section "Drawings & Downloads").

#### **Advantages**

- High acoustic performance
- Highly resistant to oil mist
- System approved for low spread of flame according to IMO FTP code



	Performance	Norms
Film thickness (micron)	19	-
Tensile strength at break (N/mm²)	250	ISO 527-1-2
Elongation at break (%)	110	ISO 527-1-2
Shrinkage (%)	1.3	150C, 15 min
Haze (%)	2.0-2.2	ASTM D 1003-61
Certification (incl. perforated steel plate)	Low flame spread	IMO FTP-code

SeaRox SL 480 Slab



#### **Application**

SeaRox SL 480 is a rigid slab made of stone wool. The product is mainly used for floating floors with a pressure -equalizing plate of steel or moulding material.

#### Installation guidelines

The installation guidelines are available at www.rockwool-rti.com. In SeaRox section you will find also the brochure "Technical Guidelines" (see section "Drawings & Downloads").

#### **Advantages**

- High mechanical and acoustic properties
- Approved for A60 Floating Floor
- Certified for marine & offshore applications



	Performance	Norms
Thermal conductivity	λ <sub>10</sub> = 0,037 (W/mK)	EN 12667
Fire classification	Non-combustible Approved for A-Class constructions	IMO FTP-code
Water absorption (short term)	<1 kg/m²	EN 1609
Sound absorption	α <sub>w</sub> = 0,75 Thickness 50 mm	ISO 354 ISO 11 654
Compressive strength	Max. 40 kN/m², 5 mm deformation at 50 mm	ISO 826
Nominal density	200 kg/m³	-

## Notes

## ROCKWOOL Technical Insulation

ROCKWOOL® Technical Insulation, a subsidiary of the international ROCKWOOL Group, is the worldwide market leader in technical insulation. With our comprehensive product range we cover the whole industrial market and marine & offshore industry, providing a full range of products and systems for the thermal and firesafe insulation of technical applications. Besides sustainable products we offer reliable expert advice, from documentation to delivery and after sales service. Throughout the whole chain from specifier, through dealer to contractor and installer we aim to add value. We don't just sell products, we supply solutions. It's this total approach that makes us the ideal choice for professionalism, innovation and trust.

All explanations correspond to our current range of knowledge and are therefore up-to-date. The examples of use outlined in this document serve only to provide a better description and do not take special circumstances of specific cases into account. ROCKWOOL Technical Insulation places great value upon continuous development of products, to the extent that we too continuously work to improve our products without prior notice. We therefore recommend that you use the most recent issue of our publications, as our wealth of experience and knowledge is always growing. Should you require related information for your specific application or have any technical queries, please contact our sales department or visit our website www.rockwool-rti.com.

## The ROCKWOOL Group

The ROCKWOOL Group is the world's leading supplier of innovative products and systems based on stone wool, improving the environment and the quality of life for millions of people. The Group is amongst the global leaders within the insulation industry. Together with other building-related products such as acoustic ceilings, cladding boards and our consultancy business, the Group ensures energy efficient and firesafe buildings with good acoustics and a comfortable indoor climate. We create green solutions for the horticultural industry, inventive special fibres for industrial use, effective insulation for the process industry and marine & offshore as well as noise and vibration systems for modern infrastructure.

Our more than 11,000 employees in more than 35 countries cater for customers all over the world. The Group's head office is located close to Copenhagen. In 2014 the Group generated sales of EUR 2.18 billion. The company is listed on the NASDAQ OMX Nordic Exchange Copenhagen. The Group's operations have a main presence in Europe and we are expanding production, sales and service activities in North and South America and Asia. Together with a broad network of business partners, this ensures that the Group's products and systems reach almost every corner of the globe. For more information, please visit www.rockwool.com.

**ROCKWOOL Limited** 

#### **ROCKWOOL Technical Insulation**

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ROCKWOOL Technical Insulation is part of ROCKWOOL International A/S

