





RAVABER



Ravaber Stonewool, superior service quality and extensive product range, becoming a world brand...



RAVABER

We will be very happy to assist our customers by providing the best facilities.



WHO WE ARE?

Ravaber has a 80,000 m² production facility including 56,000 m² covered area. Ravaber is the biggest company in the field with 110,000 tons capacity per is year. Ravago and Beşler Tekstil have joined forces and continue to make great strides for Turkey since 2013. Ravaber meets the needs of stonewool production for heat insulation, sound insulation and fire insulation by producing various sizes of stonewool board.

HISTORY

In a very short time Izoberrak has become brand name in construction field which has been established in 2007 by Beşler Tekstil A.Ş. with 20.000 tons annual production capacity.

Mardav Yalıtım is affiliate company of Belgium originated Ravago Holding that executes the domestic sales and distribution of the company that 70.000 tons in 2013.

For a long time this on going collaboration based on trust in between Ravago and Beşler Tekstil has established the Ravaber Building Material Industry Inc. by mutual signature.

Ravaber has started the operation on 1st of October 2013 with 50%-50% partnership to show his confidence in construction sector in Turkey once again.

We have activated third stonewool production line in 2015 the annual capacity increase from 40,000 tonnes to 110,000 tons, so Ravaber has the biggest production capacity not only for Turkey as well as region.



OUR TARGETS

RAVABER Company has two main priority targets:

- Firstly, produce the best quality stonewool with experience of Beşler Tekstil which owns the 50% of share and Mardav the most powerful and extensive dealer in the industry with professional staff.
- Secondly, the second main target is to make Ravaber as an international stonewool company with excellent experience on "know how" of stonewool production also establishing of stonewool production facility.

We are as a Ravaber glad to help our customers with providing the best opportunities.



ABOUT RAVAGO

Ravago; is a group has been established on 1961 in Belgium, 350 companies more than 40 countries, annual turnover is about 7 billion Euros in field of marketing sailing and production of plastically raw materials. Ravago Group; the business offering construction products and system solutions of the Ravago Building and Building Solutions, in our country operating in the construction and insulation industries Mardav Insulation Co., Stoper Building & Insulation Systems Inc., Torouss Building Elements Inc. RAVABER Building Material Industry Trade Inc. is a shareholder of the company. RAVAGO "Building and Construction Solutions" has company in Turkey, Belgium, Ukraine with Russia, including Central and Eastern Europe are 55 companies in 17 different countries.

ABOUT BEŞLER TEKSTİL

Beşler Tekstil A.Ş. has been established in Kayseri 1996 and has capacity of 80,000 spindles and annual producing 20,000 tons of cotton usage. Beşler has 50,000 m² total area with 400 employee. Beşler Tekstil is not only in domestic market it also exports its production to the European market and it as considerable in the first 1000 companies in Turkey.

Beşler Tekstil A.Ş. has decided to involve in insulation industry in 2007 with annual capacity of 20,000 tons as a Izoberrak brandname. Izoberrak has become trusted brand name of the field in a very short time with its quality on customer satisfaction and become one of two major manufacturers of stonewool with 70,000 tons annual capacity. We have activated third stonewool production line in 2015 the annual capacity increase from 40,000 tonnes to 110,000 tons, so Ravaber has the biggest production capacity not only for Turkey as well as region.

QUALITY

Simple manufacturing with the philosophy and unconditional, mission at customer satisfaction, professional R&D team...





STONEWOOL

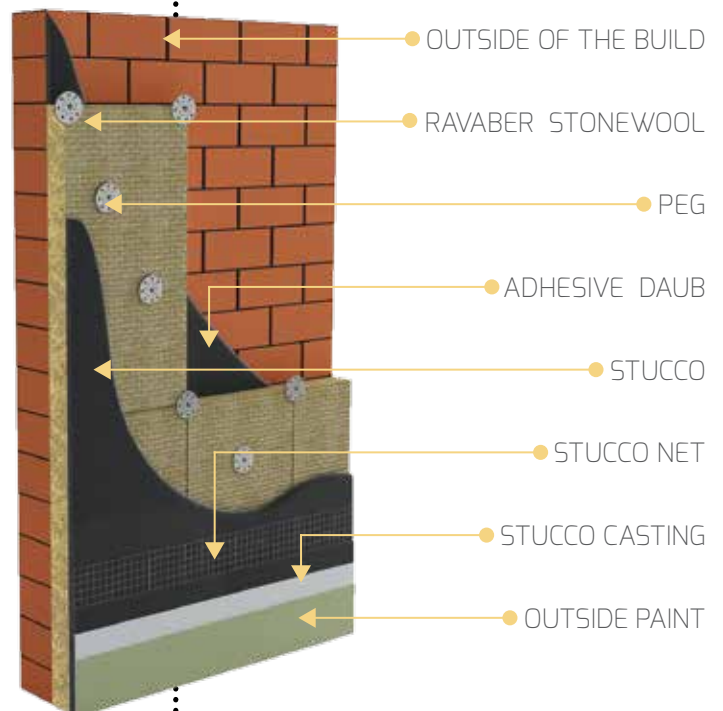
Perfect Insulations...

Stonewool is an insulation material which contains %98 natural fiber and obtained by transforming the minerals and inorganic volcanic stones into natural fiber by melting them at 1500-1600°C.

Stonewool performs heat insulation, sound insulation, damp insulation and fire protection rather efficiently in all places like roof of the houses, separating walls, outside walls, ovens, steel doors, vessels, electrical house appliances, entertainment places like cinemas and theaters.

TECHNICAL SPECIFICATIONS

- Bacteria and microorganism cannot live inside because of its inorganic structure.
- It is an ecological and eco-friendly product produced from natural raw material.
- Stonewool is a water-repellent insulation material because of its saturated (satiated) structure. It does not contain moisture because of its structure with vapour permeability.
- USING stonewool reduces the needs of fossil fuels. Therefore it alleviates global warming and climate change because the usage of stonewool reduces the carbon dioxide emission.
- Thanks to its strong and everlasting structure up to 1000C Stonewool ensures fire protection which is critically important in life. It saves time for fire teams in fire-fighting, lifesaving and evacuation while it prevents the fire from spreading.
- Stonewool ensures a comfortable ambience because it performs acoustic insulation against negative external factors like sound, noise, etc.





thermal

Ensures heat insulation in maximum level.

Thermal Conductivity Value smaller than $\lambda=0.036W/Mk$

Prevents leakage of cold and heat in winter and summer.



fire

It is A1 class Non-Combustible material which is the highest level according to DIN and EN Norms.

APPLICATION heat is Between -55 and $+760^{\circ}C$.

Stonewool ensures high level fire safety because of its enduring specification against fire. It saves time for fire teams in fire-fighting, lifesaving an evacuation while it prevents the fire from spreading.



acoustic

Ensures sound insulations between 40-90 % according to EN ISO standards.

It is a good material for absorbing sound.

It is used for acoustic insulation APPLICATIONS.

Stonewool ensure support for creating a comfortable environment with its specifications reducing the noise.



damp

Water steam diffusion resistant $\mu=1$ (same as the value of air).

It is non-corrosive, not be decayed or become fusty.

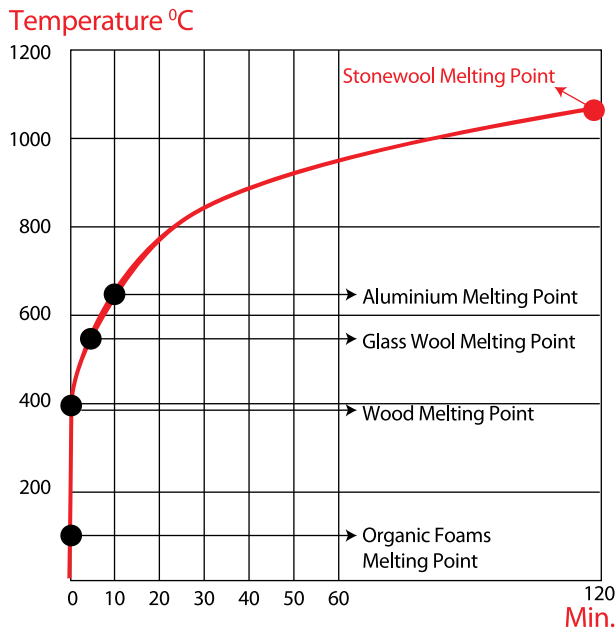
It is rustless and does not cause corrosion.



PRODUCTS

RAVABER

TECHNICAL SPECIFICATIONS



TS EN 13162

RAVABER TECHNICAL SPECIFICATIONS

STANDART	EXPLANATION	40 kg/m ³	50 kg/m ³	70 kg/m ³	90 kg/m ³	100 kg/m ³	110 kg/m ³	130 kg/m ³	150 kg/m ³
EN 822	Legend (tolerance \pm %2)	1200 mm							
EN 822	Width (tolerance \pm %1,5)	600 mm							
EN 824	Determination of Squareness Maximum 5 mm	1 mm maximum							
EN 825	Determination of Flatness Maximum 6 mm	2 mm maximum							
EN 826	Compressive Strength (%10 deformation)	-	-	-	-	≥ 15	≥ 25	≥ 35	≥ 45
EN 1604	Determination of Dimensional Stability	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
EN 1067	Determination of Tensile Strength Vertical to Faces	-	-	-	-	$\geq 7,5$	≥ 10	≥ 15	≥ 15
EN 1609	Short Term Water Absorption Wp	<1							
EN 12037	Long Term Water Absorption Wp	<3							
EN 12086	Water Vapor Diffusion Resistance Coefficient μ	<1							
EN 12667	Declared Thermal Conductivity (max. 0,04 W/(m.K)	Maks. 0,036	Maks. 0,036	Maks. 0,036	Maks. 0,036	Maks. 0,036	Maks. 0,036	Maks. 0,036	Maks. 0,036
EN 12667	Thermal Resistance (m ² K/W) R	1,39							
EN 13501-1	Reaction to Fire	A1 Class Non Combustible							
	Melting Point	C 1000							

Note: All values are 50 mm thick mineral wool boards are provided for.

HAIR-BRAIDING OVERCOATING BOARD

DESCRIPTION OF GOODS

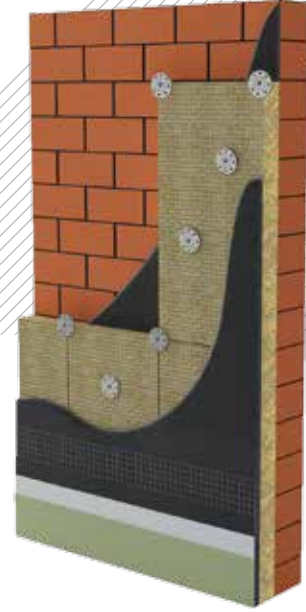
- Stonewool board for overcoating which is produced the first time in Turkey with high technology by Ravaber. Ravaber overcoating board, which contains complex fiber structure formed by interlocked fibers inside, creates resistance to withstand high pressure in lower densities. The structure of Hair- Braiding fiber makes the APPLICATION of overcoating on the stonewool more resistant and strong. Through, the load capacity on the construction and surface increases.

USING PLACES

- Used at outside of the buildings under the stucco for heat, sound insulation and fire protection.

APPLICATION

- Boards are stucked with the cement based adhesive daub on the smooth surface. APPLICATION type is shown at the left side.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF ML 150

150 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)	Compressive Strength (%10 Deformation)
	30	600x1200	4,50	5,76	8	0,83	≥ 35 kPa
40	6,00		4,32	6	1,11	≥ 40 kPa	
50	7,50		2,88	4	1,39	≥ 45 kPa	
60	9,00		2,16	3	1,67	≥ 55 kPa	
80	12,00		2,16	3	2,22	≥ 60 kPa	
100	15,00		2,16	3	3,33	≥ 80 kPa	

TECHNICAL SPECIFICATION AND SIZE OF CS 35

CS 35	Thickness (mm)	Size (mm)	Package (m ²)	Quantity	Thermal Resistance (RValue)	Compressive Strength (%10 Deformation)
	30	600x1200	5,76	8	0,83	≥ 35 kPa
40	4,32		6	1,11	≥ 35 kPa	
50	2,88		4	1,39	≥ 35 kPa	
60	2,16		3	1,67	≥ 35 kPa	
80	2,16		3	2,22	≥ 35 kPa	
100	2,16		3	3,33	≥ 35 kPa	

CS 35 is a product developed by only Izoberrock for the first time in Turkey. It is more economical and lower density product providing more than 35 kPa compression strength in lower densities than the standards of TSE EN 826.

PARTITION WALL BOARD

DESCRIPTION OF GOODS

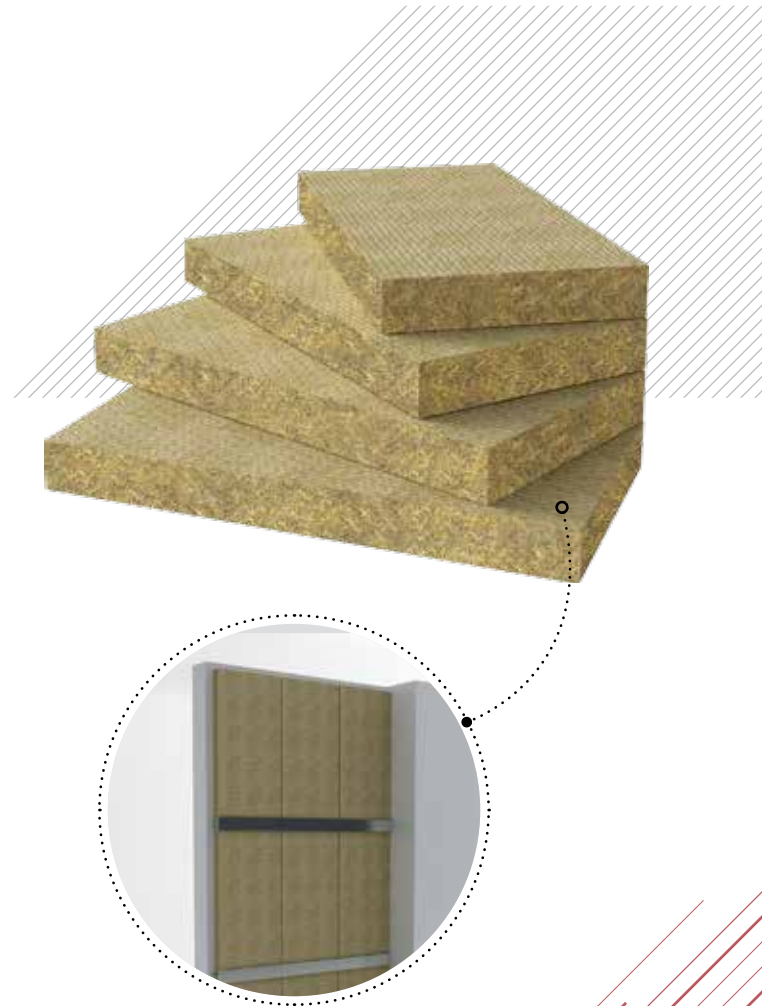
- Stonewool board without facing.
- Supplied in shrunk packages to the market.

USING PLACES

- Elevator Shafts and Stairwells,
- Separating walls,
- Neighbour walls.

APPLICATION

- Ensures heat, sound and fire insulation by applying in bearing walls, separating walls and bearing constructions.
- The product with same quality is pressed 50% in comparison with the usual stonewool package:
- It can be stored outside because the package is completely coated.
- Ensures big advantage regarding storing cost.
- The product reaches it's standard thickness when the package is opened.
- Can be transported more easily as pressed.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF ABL 40

	TECHNICAL SPECIFICATION AND SIZE OF ABL 40					
	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
40 kg/m ³	30	600x1200	1,20	11,52	16	0,83
	40		1,60	7,20	10	1,11
	50		2,00	5,76	8	1,39
	60		2,40	5,76	8	1,67
	80		3,20	4,32	6	2,22
	100		4,00	2,88	4	2,78
	120		4,80	2,16	3	3,33

TECHNICAL SPECIFICATION AND SIZE OF ABL 50

	TECHNICAL SPECIFICATION AND SIZE OF ABL 50					
	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
50 kg/m ³	30	600x1200	1,50	11,52	16	0,83
	40		2,00	7,20	10	1,11
	50		2,50	5,76	8	1,39
	60		3,00	5,76	8	1,67
	80		4,00	4,32	6	2,22
	100		5,00	2,88	4	2,78
	120		6,00	2,16	3	3,33

ORWOOL

DESCRIPTION OF GOODS

- Orwool is a very important scientific invention which has no chemicals such as phenol and formaldehyde. Instead it has completely natural elements. Removal of phenol and formaldehyde from the process reduces gas emission and allows the environmentally sensitive production. Insulation of industrial ovens has advantage for customers since there is no organic content odour and the gas emission. It also preferable to use in landless agriculture! APPLICATION due to it's nature of phenol free and formaldehyde free.

USING PLACES

- Insulation of ovens and derivatives,
- Landless agricultural APPLICATION.

APPLICATION

- Thermal Conductivity = 0,036 W.m/K
- Sound Absorbtion Value : (60 decibel)
- Reaction to Fire: A1
- There is no impact dust & irritation, it does not itch.
- It has a flexible construction so can apply with a board and mattress.



**NEW
PRODUCT**



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF ORWOOL

Thickness (mm)	Size (mm)	Package (m ²)	Quantity	Thermal Resistance (RValue)
50	600x1200	5,76	8	1,39
60		5,76	8	1,67
80		4,32	6	2,22
100		2,88	4	2,78
120		2,16	3	3,33
140		2,16	3	3,88

OUTSIDE SURFACE BOARD

DESCRIPTION OF GOODS

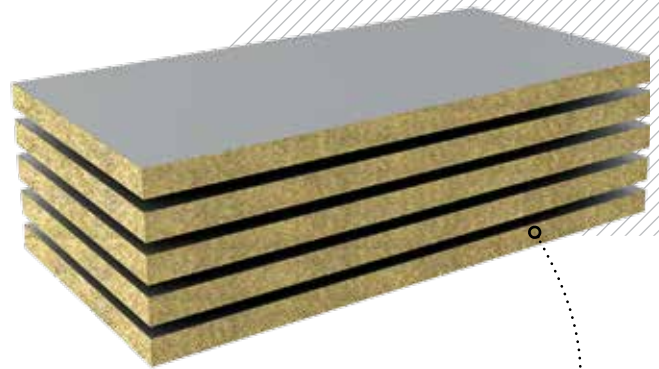
- Stonewool board with aluminium foil or glass tissue coated on one side.
- Presented to the market in shrinked packages.

USING PLACES

- Ensures heat, sound and fire insulation in granite, marble, aluminium and glasscladdings.
- Ensures fire insulation at air-conditioning surfaces.

APPLICATION

- Applied between carrier profiles at the surface of the buildings through the anchorage equipments.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF DLC 50

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
50 kg/m ³	30	600x1200	1,50	11,52	16	0,83
	40		2,00	7,20	10	1,11
	50		2,50	5,76	8	1,39
	60		3,00	5,76	8	1,67
	80		4,00	4,32	6	2,22
	100		5,00	2,88	4	2,78
	120		6,00	2,16	3	3,33

FLOATING FLOOR BOARD

DESCRIPTION OF GOODS

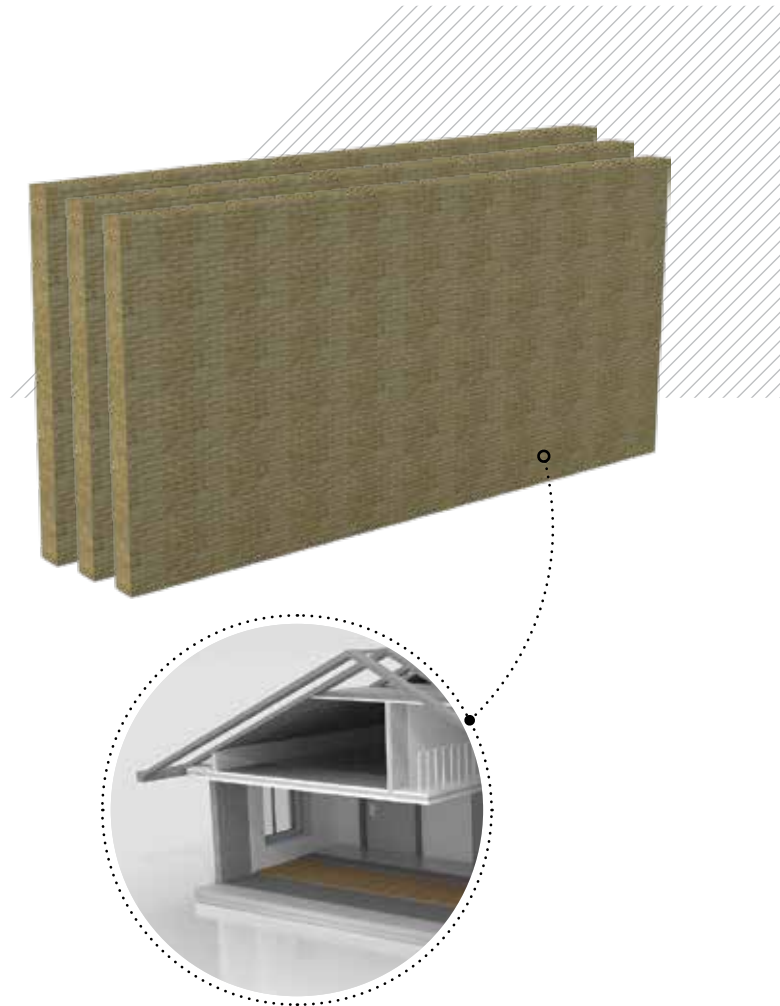
- Stonewool board without facing.
- Supplied in shrunk packages to the market.

USING PLACES

- Between two flats, under the concrete,
- Coverings at open passages,
- Under the source of vibration,
- Floor coverings in flats and buildings.

APPLICATION

- Boards are applied freely after floor is insulated against humidity. APPLICATION is completed by preferred floor covering after concreting.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF YDL 110

110 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
	25	600x1200	2,75	7,20	10	0,69
	30		3,30	5,76	8	0,83
	35		3,85	5,04	7	0,97

ECOWOOL

DESCRIPTION OF GOODS

- It is a partition wall mineral wool board.
- Besides it has heat and fire insulation characteristic, it also has good sound absorption characteristic. It is made of very important binder which is environment and health friendly. It is also phenol free and formaldehyde free. Removing phenol, formaldehyde and the other chemicals from the production process support to reduce harmful gas emissions.
- It is a very big advantage for consumers of not having any chemicals, any gas emissions, any organic substance and any odors in the mineral wool, especially in the industrial APPLICATION of stonewool such as oven and etc.

USING PLACES

- It offers a great economic advantage for consumers.



TECHNICAL SPECIFICATIONS

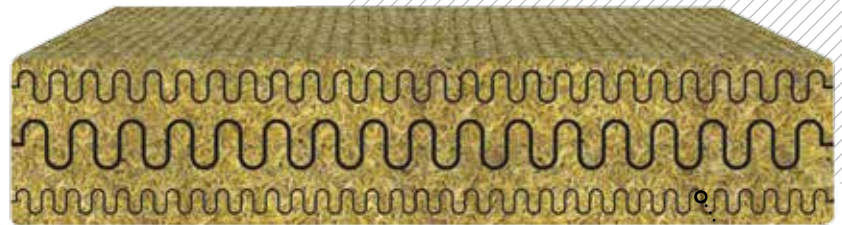
TECHNICAL DATA SHEET OF ECOWOOL

PROPERTIES	SYMBOL	UNIT	TOLERANCE	TS EN 13162					STANDARD
MATERIAL	MW								TS EN 13162
DENSITY	d	kg/m ³	(+,-) % 10	Depending on the thickness differences					TS EN 1602
Length	l	mm	(+,-) % 2	1200					TS EN 822
Wid	b	mm	(+,-)% 1,5	600					TS EN 822
Determination of Squaressth	S _b	mm	max. 5 mm	2 mm					TS EN 824
Determination of Flatness	S _{max.}	mm	max. 3 mm	1,8 mm					TS EN 825
Determination of Dimensional Stability	DS (T +)	mm	%	<1					TS EN 1604
Compressive Strength (%10 Deformation)	CS(10/Y)	kPa		N/A					TS EN 826
THICKNESS	d _N	mm	(-3, +5)	50	60	70	80	100	TS EN 823
Declared Thermal Conductivity	λ _{ort}	w/mK	25°C	max. 0,036					TS EN 12667
Reaction to Fire			A1	A1					TS EN 13501-1
THERMAL RESISTANCE	R _D	m ² K/W		1,38	1,66	1,94	2,22	2,77	TS EN 13162
Maximum Temperature of Usage		°C		720					
Melting Point		°C		>1000					DIN 4102
Water Vapour Diffusion Value	μ		1	1					TS EN 12086
Short Term Water Absorption	W _p	kg/m ²	<1	<1					TS EN 1609
Long Term Water Absorption	W _{lp}	kg/m ²	<3	<3					TS EN 12087
Certificates	CE SERT.NO: 1020-CPD-010028090, ISO 9001, ISO 14001, ISO 18001, ISO 50001								
Product Key	MW-TS EN 13162-T4-DS(T+)								
CHEMICAL PROPERTIES	PHENOL FREE, FORMALDEHYDE FREE AND ENVIRONMENT FRIENDLY								
Facing	it can covered with yellow or black glass tissue or aluminum foil								

THREE DENSITY OVERCOATING BOARD

DESCRIPTION OF GOODS

- Stonewool surfaces, where stucco and adhesives are applied on, are denser and harder. Therefore:
- At the same thickness, more economical product,
- At the same thickness, ensures better sound insulation,
- At the same thickness, lighter product,
- There is no effect of dust & irritation, do not irritate.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION OF 3 DENSITY OVERCOATING BOARD	
Fire Behavior	A1 - EN 13501 - 1
Declared Thermal Conductivity	0.036 W/mK EN 12667
Water Vapor Diffusion Resistance Coefficient	$\leq 1,0 \text{ kg/m}^2$ EN 12086
Determination of Tensile	CS(10)20 $\geq 20 \text{ kPa}$ EN 826
Strength Vertical to Faces	R 10 $\geq 12 \text{ kPa}$ EN 1607
Short Term Water Absorption W_p	WS $\leq 1,0 \text{ kg/m}^2$ EN 1609
Long Term Water Absorption W_{pP}	WL(P) $\leq 3,0 \text{ kg/m}^2$ EN 1609
Thickness Tolerance	T4 -3 +5 mm EN 823
Melting Point	Tt $> 1000 \text{ }^\circ\text{C}$ DIN 4102

Density may change according to the product type.

ROOF BOARD

DESCRIPTION OF GOODS

- Used at terrace roofs for the purpose of heat, sound and damp insulation.
- Stonewool board without facing. Supplied in shrinked packages to the market.

USING PLACES

- All metal and wooden roofs.
- All kinds of terraces.

APPLICATION

- Applied on the trapez metal or aerated concrete roof plates.
- Used for the purpose of heat insulation over the vapor barrier.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF TCL 150

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)	Compressive Strength (%10 Deformation)
150 kg/m ³	30	600x1200	4,50	5,76	8	0,83	≥ 35 kPa
	40		6,00	4,32	6	1,11	≥ 40 kPa
	50		7,50	2,88	4	1,39	≥ 45 kPa
	60		9,00	2,16	3	1,67	≥ 55 kPa
	80		12,00	2,16	3	2,22	≥ 60 kPa
	100		15,00	2,16	3	2,78	≥ 80 kPa

ROOF MATTRESS

DESCRIPTION OF GOODS

- Roof mattress without facing and with facing with aluminium foil on one or both side.
- It is presented to the market with shrunk roll packages.

USING PLACES

- Roof surfaces,
- Between roof parts.

APPLICATION

- Used at the roofs depending on the roof parts by laying and spreading method.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF CS 40

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Thermal Resistance (RValue)
	40 kg/m ³	50	1200x8000	2,00	9,60
60		2,40		9,60	1,67
80		1200x5000	3,20	6,00	2,22
100			4,00	6,00	2,78
120		1200x3000	4,80	3,60	3,33
140			5,60	3,60	3,89

TECHNICAL SPECIFICATION AND SIZE OF CS 50

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Thermal Resistance (RValue)
	50 kg/m ³	50	1200x8000	2,50	9,60
60		3,00		9,60	1,67
80		1200x5000	4,00	6,00	2,22
100			5,00	6,00	2,78
120		1200x3000	6,80	3,60	3,33
140			7,60	3,60	3,89

BLUE'S DESIBEL

DESCRIPTION OF GOODS

- Insulation material produced by laminating the gypsum board with aluminium & without aluminium facing on Ravaber stonewool board.
- Usage of aluminium foil facing at Blue's Decibel eliminates the risk of condensation because of the high value of water steam diffusion resistant between stonewool and gypsum board.
- Presented to the market in stretched pallets.

USING PLACES

- Internal and external surfaces of all kinds of structures of reinforced concrete,
- Stairwells,
- Partition walls,
- Interior insulation APPLICATIONs of the constructions.

APPLICATION

- Applied on the smooth surfaces of the walls with special gypsum sticking daub.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF BLUE'S DESIBEL

	Thickness (mm)	Size (mm)	Thickness of Gypsum (mm)	Package (m ²)	Thermal Conductivity	Thermal Resistance (RValue)
110 kg/m ³	30	1200X2650	1,25	95,40	0,036	0,83
	40			79,50	0,036	1,11
	50			66,78	0,036	1,39

AIR CONDITION BOARD

DESCRIPTION OF GOODS

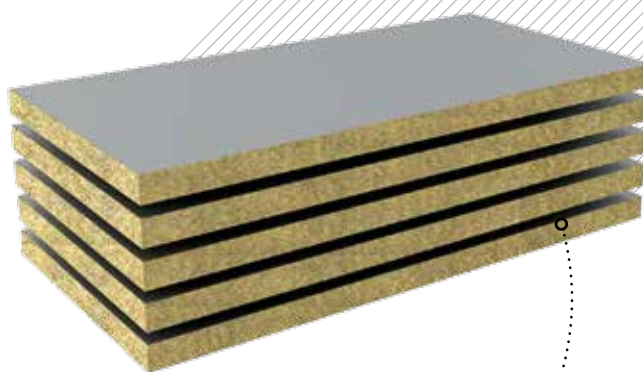
- Stonewool board with aluminium foil facing on one side.
- Presented to the market in shrinked packages.

USING PLACES

- Air conditioning ducts,
- Ventilating ducts.

APPLICATION

- Installed by the pins on the APPLICATION places.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF KL 60

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
60 kg/m ³	25	600x1200	1,50	11,52	16	0,69
	30		1,80	11,52	16	0,83
	40		2,40	7,20	10	1,11
	50		3,00	5,76	8	1,39

INDUSTRY BOARD

DESCRIPTION OF GOODS

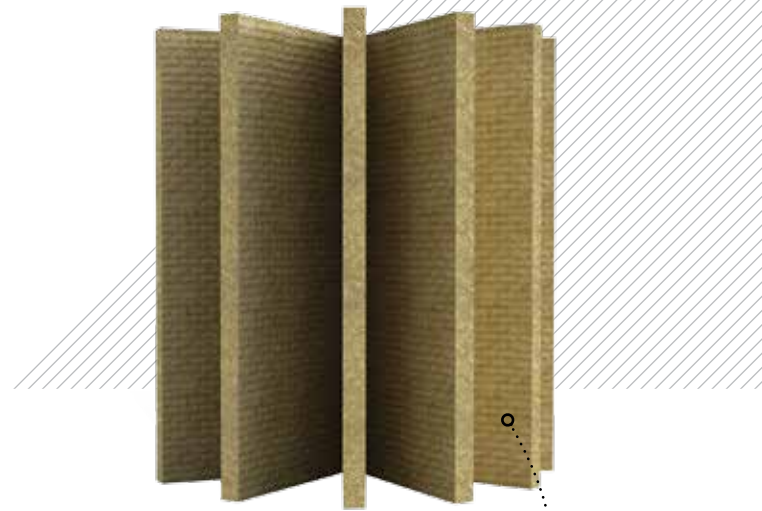
- Stonewool board without facing. Presented to the market in shrinked packages.
- Used for heat, sound and fire insulation up to the temperatures 760°C in industrial areas.

USING PLACES

- Steel constructions,
- Industrial plants,
- Process equipments,
- Applications of ready panel.

APPLICATION

- Installed by the pins on the APPLICATION places or mounted at the spaces on the carrier profiles. Outside is covered with metal sheet or similar materials.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF SL 70

70 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
	25	600x1200	1,75	11,52	16	0,69
30	2,10		11,52	16	0,83	
40	2,80		7,20	10	1,11	
50	3,50		5,76	8	1,39	
60	4,20		4,32	6	1,67	
80	5,60		5,76	8	2,22	
100	7,00		2,88	4	2,78	
120	8,40		2,88	4	3,33	

TECHNICAL SPECIFICATION AND SIZE OF SL 100

100 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
	25	600x1200	2,5	7,2	10	0,69
30	3		5,76	8	0,83	
40	4		5,04	7	1,11	
50	5		4,32	6	1,39	
60	6		4,32	6	1,67	
80	8		2,88	4	2,22	
100	10		2,88	4	2,78	
120	12		2,16	3	3,33	

INDUSTRY MATTRESS

DESCRIPTION OF GOODS

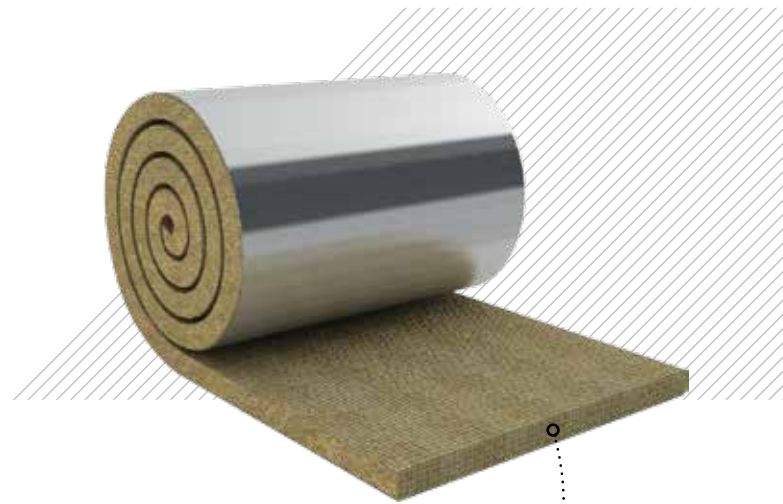
- Stonewool mattress with and without aluminium foil facing.
- Presented to the market in shrinked packages in roll.

USING PLACES

- Industrial plants,
- Boilers and central heating systems,
- Process equipments,
- Chimneys of boiler and central heating systems,
- Steel doors and constructions.

APPLICATION

- Ensures heat, sound and fire insulation in industrial areas, industrial equipments like ovens and boilers exposed high temperature. Mounted to the insulation surfaces with pins. Surface of the stonewool is coated with metal sheet when it is necessary.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF SS 70

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Thermal Resistance (RValue)
70 kg/m ³	30	1200x8000	2,10	9,60	0,83
	40		2,80	9,60	1,11
	50	1200x5000	3,50	6,00	1,39
	60		4,20	6,00	1,67
	80	1200x3000	5,60	3,60	2,22
	100		7,00	3,60	2,78

OVEN INSULATION BOARD & MATTRESS

DESCRIPTION OF GOODS

- It is used for protecting the temperature.

USING PLACES

- Electrical home appliances,
- Industrial ovens,
- Painting ovens.

APPLICATION

- It is produced with or without binder (formaldehyde) depending on using places.
- It is mounted with metal pins and screws. Outside surface is covered with metal sheet or similar material.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF FL 32 AND FL 40

32 and 40 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Quantity	Thermal Resistance (RValue)
	30	600x1200*	1,2	16	0,83
	40		1,6	10	1,11
	50		2	8	1,39

TECHNICAL SPECIFICATION AND SIZE OF FS 32 AND FS 50

32 and 50 kg/m ³	Thickness (mm)	Size (mm)	Package (m ²)	Thermal Resistance (RValue)
	30	1200x8000	9,60	0,83
	40		9,60	1,11
	50	1200x5000	6,00	1,39

*Can be produced in different sizes depending on the order.

INDUSTRY MATTRESS WITH WIRE MESH

DESCRIPTION OF GOODS

- Stonewool mattress stitched with galvanized wire mesh.
- It is presented to the market in rolls.

USING PLACES

- Industrial places,
- Boilers for central heating,
- Process equipments,
- Ducts and chimneys.

APPLICATION

- Ensures heat, sound and fire insulation in industrial equipments exposed high temperature. Ensures easy usage on the cylindrical elliptical and non-smooth surfaces by means of it's wire mesh covering. It is installed with the pins on the APPLICATION places.
- Surface of the stonewool is coated with metal sheet when it is necessary.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF RT 90

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Thermal Resistance (RValue)
90 kg/m ³	30	600x8000 or 1200x8000	2,70	9,60	0,83
	40		3,60	9,60	1,11
	50	600x5000 or 1200x5000	4,50	6,00	1,39
	60		5,40	6,00	1,67
	80	600x3000 or 1200x3000	7,20	3,60	2,22
	100		9,00	3,60	2,78

THERMAL CONDUCTIVITY VALUES AT VARIOUS TEMPERATURES

	Temp. Range (°C)	Thermal Conductivity Value (W/mK)	Standard
80 kg/m ³	0	0,032	EN 12667 ENISO 8497
	50	0,0385	
	100	0,049	
	150	0,059	
	200	0,068	
	250	0,084	
	300	0,110	
	350	0,115	

TECHNICAL SPECIFICATION AND SIZE OF RT 80

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Thermal Resistance (RValue)
80 kg/m ³	30	600x8000 or 1200x8000	2,40	9,60	0,83
	40		3,20	9,60	1,11
	50	600x5000 or 1200x5000	4,00	6,00	1,39
	60		4,80	6,00	1,67
	80	600x3000 or 1200x3000	6,40	3,60	2,22
	100		8,00	3,60	2,79

TECHNICAL SPECIFICATION AND SIZE OF RT 125

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Thermal Resistance (RValue)
125 kg/m ³	30	600x3000 or 1200x3000	3,75	9,60	0,83
	40		5,00	9,60	1,11
	50	600x5000 or 1200x5000	6,25	6,00	1,39
	60		7,50	6,00	1,67
	80	600x3000 or 1200x3000	10,00	3,60	2,22
	100		12,50	3,60	2,78

MARINE BOARD

DESCRIPTION OF GOODS

- Stonewool board produced in 4 different types according to application area. It is presented to the market in shrinked packages.

USING PLACES

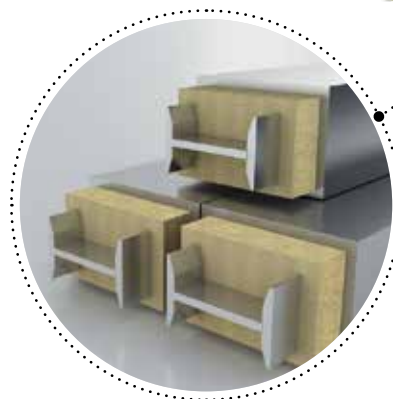
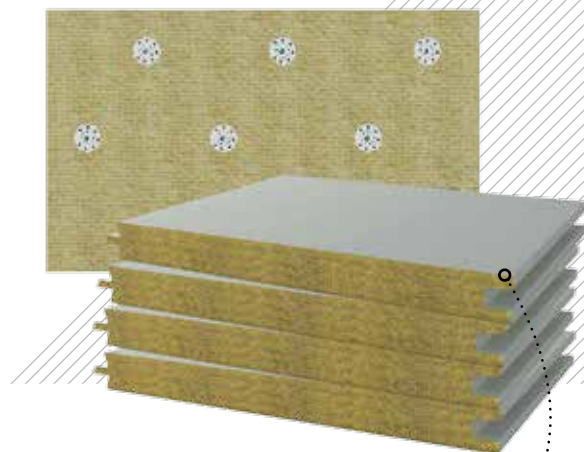
- Body the ships and naval constructions,
- Ship installments,
- Fire-proof partitions,
- Fire-safe doors.

APPLICATION

- Marine board which is non-combustible characteristic up to 760°C is used for heat, sound and fire insulation at the places exposed hightemperature.
- It is applied by fixing pins on the smooth surfaces, outside surface is covered by metal sheet.



Ravaber Yapı Urunleri San. Tic. A.Ş. has from Rina Laboratory Marine Non-Combustible (Fireproof) and A30 certificates.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF GL 45

45 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
	30	600x1200	1,35	11,52	16	0,83
50	2,25		5,76	8	1,39	
80	3,60		3,60	5	2,22	
100	4,50		2,88	4	2,78	

TECHNICAL SPECIFICATION AND SIZE OF GL 100

100 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
	40	600x1200	4,00	5,04	7	1,11
50	5,00		4,32	6	1,39	
60	6,00		4,32	6	1,67	
80	8,00		2,88	4	2,22	

TECHNICAL SPECIFICATION AND SIZE OF GL 70

70 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
	40	600x1200	2,80	7,20	10	1,11
50	3,50		5,76	8	1,39	
60	4,20		4,32	6	1,67	
80	5,60		3,60	5	2,22	

TECHNICAL SPECIFICATION AND SIZE OF GL 130

130 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
	30	600x1200	3,90	5,76	8	0,83
40	5,20		4,32	6	1,11	
50	6,50		3,60	4	1,39	
60	7,80		3,60	3	1,67	

MARINE MATTRESS

DESCRIPTION OF GOODS

- Stonewool mattress with or without aluminium foil facing on one side. It is presented to the market in shrinked packages in roll.

USING PLACES

- Ship & naval constructions,
- Fire-proof partitions,
- Interior ship installations.

APPLICATION

- It is applied in the places exposed very high temperature for heat, sound and fire insulation by mounting with fixing pins.
- Outside surface of stonewool is covered by metal sheet when it is necessary.



Ravaber Yapı Ürünleri San. Tic. A.Ş. has from Rtna Laboratory Marine Non-Combustible (Fireproof) and A30 certificates.

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF GS 70

	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Thermal Resistance (RValue)
70 kg/m ³	30	1200x8000	2,10	9,60	0,83
	40		2,80	9,60	1,11
	50	1200x5000	3,50	6,00	1,39
	60		4,20	6,00	1,67
	70	1200x3000	4,90	3,60	1,94
	80		5,60	3,60	2,22
	100		7,00	3,60	2,78

PREFABRICATED PIPE

DESCRIPTION OF GOODS

- Stonewool pipe with or without aluminium foil facing. It is used for the insulation of mechanical installations.
- It is presented to the market in carton boxes or wooden pallets in accordance with the diameter of pipe.

USING PLACES

- It is used for heat insulation and fire protection in industry pipes and insulations pipes exposed high temperature.
- It used for sound and vibration insulation at process equipments.

APPLICATION

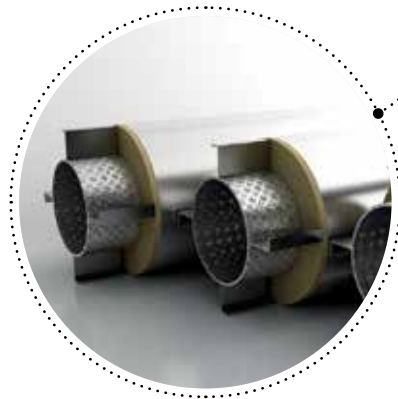
- It is applied with or without aluminium foil facing according to using fields. After covering the pipe with prefabricated stonewool, places of join is fixed with screw and rivet by the method of cramping and sticking. Aluminium foil on the surface of the prefabricated stonewool is fixed with special strap.

If R= 2D then 1 intermediate part ($\alpha=45^\circ$) is cut.

If R= 3D then 1 intermediate part ($\alpha=30^\circ$) is cut.

If R= 5D then 1 intermediate part ($\alpha=22,5^\circ$) is cut.

* Density, thickness, diameter and dimensions are produced according to the demand.



TECHNICAL SPECIFICATIONS

Nominal Diameter of Pipe To Be Insulated		Stonewool Pipe Section Insulation Thickness (mm)						
Inch	mm	25	30	40	50	60	80	100
1/4	13	+	+	+	+	+	+	+
1/2	21	+	+	+	+	+	+	+
3/4	27	+	+	+	+	+	+	+
1	33	+	+	+	+	+	+	+
1 1/4	42	+	+	+	+	+	+	+
1 1/2	48	+	+	+	+	+	+	+
2	60	+	+	+	+	+	+	+
2 1/2	76	+	+	+	+	+	+	+
3	89	+	+	+	+	+	+	+
4	114	+	+	+	+	+	+	+
5	140	+	+	+	+	+	+	+
6	169	+	+	+	+	+	+	+
8	219	+	+	+	+	+	+	+
10	273	+	+	+	+	+	+	+
12	324	+	+	+	+	+	+	+
14	356	+	+	+	+	+	+	+

Density (kg/m³) 90-100

°C	Thermal Resistance (RValue)
50	0,037
100	0,046
150	0,054
250	0,074
300	0,089
350	0,102

SOLAR PANEL INSULATION MATTRESS AND BOARD

DESCRIPTION OF GOODS

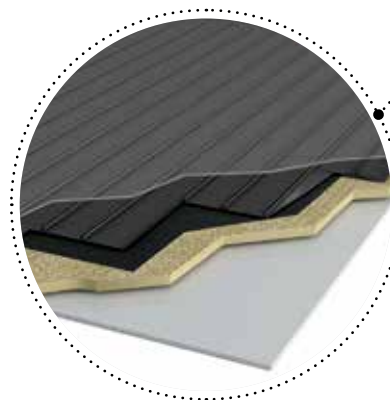
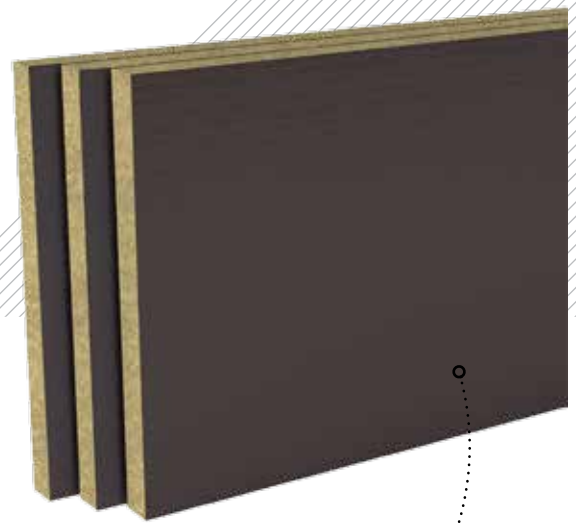
- Stonewool board and roll which ensures insulation for the solar heat in the collectors.
- It is presented to the market in shrinked packages and rolls.

USING PLACES

- Solar collectors.

APPLICATION

- After spreading stonewool at the bottom of the solar collectors, connection between the collector and stonewool is cut by covering aluminium foil or black glass tissue on the stonewool. By means of the bakelite binding agent (formaldehyde) used in the production of stonewool, stains formed because of the damp glass exposed the sunlight is prevented.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF GK 40

40 kg/m ³ **	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Thermal Resistance (RValue)
	40	1200x1900**	1,60	2,28	1,11
	50		2,00	2,28	1,39
	60		2,40	2,28	1,67

TECHNICAL SPECIFICATION AND SIZE OF GK 70

70 kg/m ³ **	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)
	25	600x1200*	1,75	11,52	16	0,69
	50		3,50	5,76	4	1,39

* Can be produced in different sizes depending on the order.

** Produced in different densities depending on the order.

ROOF STONEWOOL SANDWICH PANEL

DESCRIPTION OF GOODS

- Especially preferable for the buildings which need high fire security. Pressure strength of the panel is increased through turning fibers uprightly to the panel surface by automatic slicing. It is applicated rapidly, resitant to proliferation of bactery.

USING PLACES

- Used for covering outside of buildings.

APPLICATION

- Plane hangars, shoping centers, educational facilities, military places, silos, spor salons, indoor swimming pools, prefabricated buildings, cold rooms, roofs of the buildings, storehouses.

STRUCTURAL CHARACTERISTICS

Inner and Outer Surface Metal Types:

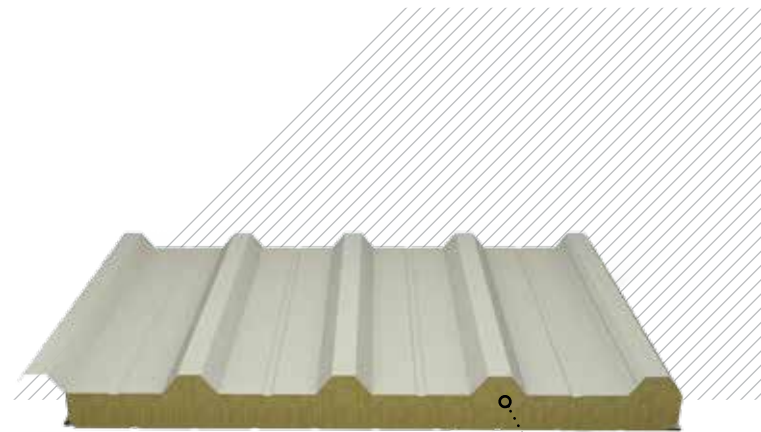
- a) Galvanized Metal Sheet : 0,40-0,50-0,60-0,70 mm
 b) Aluminium : 0,50-0,60-0,70 mm

Paint Characteristics: Polyester, PVDF, Plastizol, Antibacterial. If it is demanded, polyethylene foil can be used to prevent damages of the paint during mounting.

Paint Alternatives: RAL Catalogue Colours.

Stonewool Insulation Densities: 80-100-110-150 kg/m³

Insulation Thickness: 5-7,5-10 cm



TECHNICAL SPECIFICATIONS

CONSTRUCTION PHYSICS'S VALUES FOR ROCKWOOL PANEL

Panel Thickness (mm)	50	75	100
U Value	0,60	0,41	0,31
Sound Insulation	30	32	32

WEIGHT CARRYING TABLE FOR ROOF STONEWOOL SANDWICH PANEL

Metal thickness 0,05+0,5 mm Galvanized sheet	Panel Thickness	Threshold range (m) P=kg/m ²			
		1,0	1,5	2,0	2,5
	50 mm	1120	780	495	335
	75 mm	1485	1265	788	536
	100 mm	1870	1050	1000	750

OUTSIDE STONEWOOL SANDWICH PANEL

DESCRIPTION OF GOODS

- It produced at the continuous panel production lines. It can be installed rapidly and decrease maintenance and repair cost through strong structure. Meanwhile, it has all decorative structure.

USING PLACES

- Used for covering outside of buildings.

APPLICATION

- Plates are fixed in such a way to prevent damaging the panels. It can be placed horizontal or vertical according to the project.

STRUCTURAL CHARACTERISTICS

Inner and Outer Surface Metal Types:

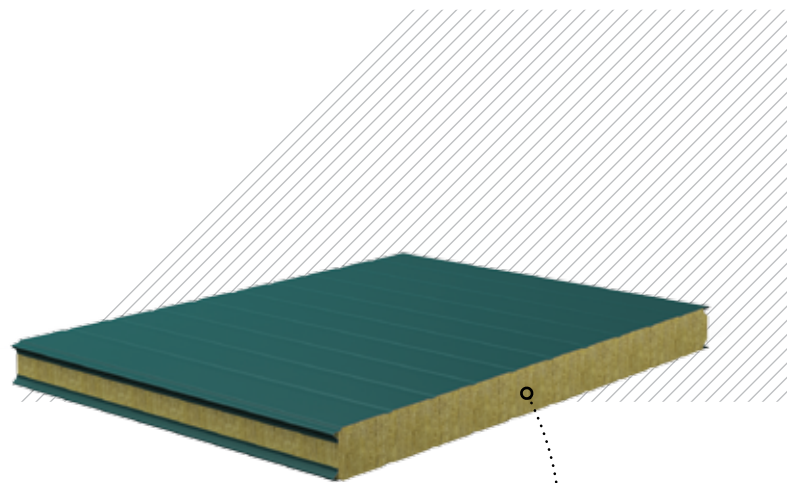
- Galvanized metal sheet : 0,40-0,50-0,60-0,70 mm
- Aluminium : 0,50-0,60-0,70 mm

Paint Characteristics: Polyester, PVDF, Plastizol, Antibacterial. If it is demanded, polyethylene foil can be used to prevent damages of the paint during mounting.

Paint Alternatives: RAL Catalogue Colours.

Stonewool Insulation Densities: 80-100-110-150 kg/m³

Insulation Thickness: 5-7,5-10 cm



TECHNICAL SPECIFICATIONS

CONSTRUCTION PHYSICS'S VALUES FOR ROCKWOOL PANEL

Panel Thickness (mm)	50	75	100
U Value	0,60	0,41	0,31
Sound Insulation	30	32	32

MAXIMUM OPENNING VALUES FOR OUTSIDE ROCKWOOL SANDWICH PANEL (L 7150 ACCORDING TO DEFLECTION CONDITIONS, FOR 80 KG/M² WIND PRESSURE)

Panel Thickness (mm)	0,5+0,5 mm Galvanized Metal Sheet			0,6+0,5 mm Galvanized Metal Sheet		
	50	70	100	50	70	100
Sound Insulation	3,40	4,60	5,70	3,50	4,80	6,0

DOOR INSULATION BOARD

DESCRIPTION OF GOODS

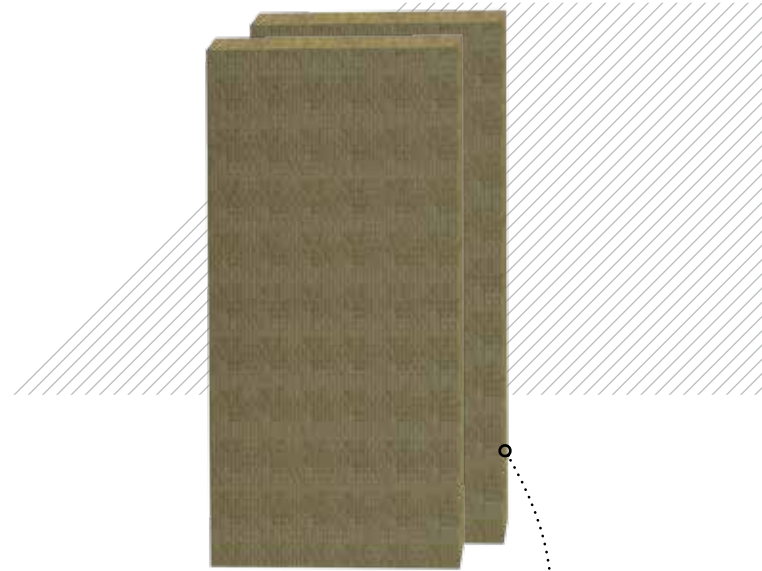
- Low or high density stonewool board with or without facing. It is presented to the market in shrinked package or pallets according to its dimensions.

USING PLACES

- Inside of door & side parts of steel doors,
- Fire safety doors,
- Inside parts of the doors of cold air warehouses,
- Doors of the industrial ovens.

APPLICATION

- At door production, stonewool boards are mounted to the inner body between two surfaces and side parts by pressing or pins. It ensures thermal, sound and fire insulation at the door regions.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE OF KL 40

	Thickness (mm)	Size (mm)	Thermal Resistance (RValue)
40 kg/m ³	40	600x2000*	1,11
	50		1,39
	60		1,67
	80		2,22
	100		2,78

TECHNICAL SPECIFICATION AND SIZE OF KL 70

	Thickness (mm)	Size (mm)	Thermal Resistance (RValue)
70 kg/m ³	25	600x2000*	0,69
	50		1,39
	80		2,22
	100		2,78

* Can be produced in different sizes depending on the order.

** Produced in different densities depending on the order.

FIREPLACE BOARD

DESCRIPTION OF GOODS

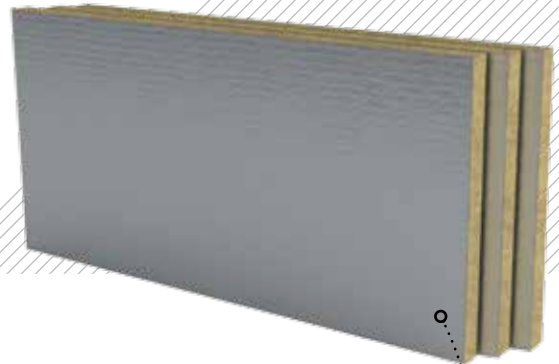
- Stonewool board with aluminium foil facing. Thermal insulation of furnace chamber and fireplaces.

USING PLACES

- Fireplace
- Ovens

APPLICATION

- Used to the inside insulation of furnace casing. Pressed density is about 110 kg/m³.



TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION AND SIZE FIREPLACE BOARD

Explanation	Value
Fire Behaviour	A1 (EN 13501-1)
Size	600 x 1000 mm (EN 822)
Thickness	25 - 100 mm (EN 823)
Thermal Conductivity	max. 0,0036 (for 10°C)
Short Term Water Absorption	≤ 1 kg/m ²
Density	110 kg/m ³

BITUMEN STONEWOOL BOARD

DESCRIPTION OF GOODS

- It is used in terrace roof's insulation of heat, sound and damp.
- It is bituminous stonewool board. It is offered to the market by shrinked packages.
- One side of the bitumen terrace board is covered with hot melt protected by a film coated glass tissue is impregnated with bitumen. This cover, provides healthy adhesion for waterproof layer.
- After burning of thin polipropilen film layer with torch flame, without any need of extra adhesive layer, the APPLICATION is very easy with sticking on bitumen stonewool roof board.

USING PLACES

- All wood and metal roof,
- All kinds of terraces.



TECHNICAL SPECIFICATIONS

BEHAVIOUR UNDER POINT LOAD

Symbol	Value	Unit	Standard
PL(5)650	≥ 650	N	TS EN 12430

TECHNICAL SPECIFICATION AND SIZE OF TCL 150

150 kg/m ³	Thickness (mm)	Size (mm)	kg/m ²	Package (m ²)	Quantity	Thermal Resistance (RValue)	Compressive Strength (%10 Deformation)
	30	600x1200	4,50	5,76	8	0,83	≥ 35 kPa
40	6,00		4,32	6	1,11	≥ 40 kPa	
50	7,50		2,88	4	1,39	≥ 45 kPa	
60	9,00		2,16	3	1,67	≥ 55 kPa	
80	12,00		2,16	3	2,22	≥ 60 kPa	
100	15,00		2,16	3	2,78	≥ 80 kPa	

STONEWOOL LOOSE

DESCRIPTION OF GOODS

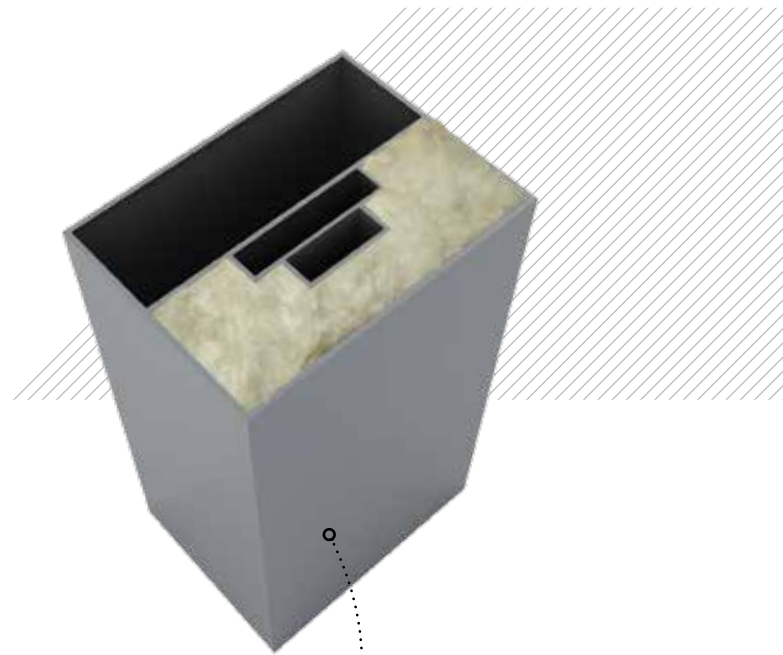
- Stonewool loose is supplied to the market by 20 kg packaging.
- It is used for fire, heat, sound and humidity insulation for the places
- Where are not suitable for stonewool board or mattress APPLICATION.

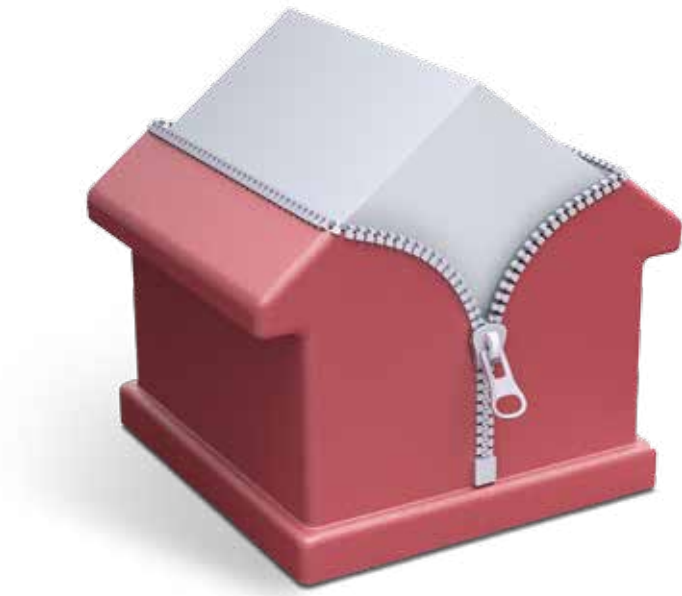
USING PLACES

- Laboratory equipments,
- Cups with double walls,
- Electrical house devices,
- Electric cables and passages of the installation.

APPLICATION

- It filled by stuffing to the spaces. Stuffed density is Approximately 80 kg/m³.





RAVABER STONEWOOL
100 % natural variety of goods,
best heat insulation, sound insulation,
fire insulation, protection to damp and
wonderful solutions for your builds...



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