



ISOMAT

YOUR PARTNER FOR INSULATION

ISOMAT

YOUR PARTNER FOR INSULATION

ISOMAT Slovenia:

Isomat Main Production and Trade Products:

- TDS's and DoP's

ISOMAT PRODUCTS



MINERAL WOOL PIPE SECTIONS MWPS without ALU foil

Pipe insulation of the highest dimensional accuracy, cut out of mineral wool block. The pipe sections have longitudinal slit for easy and quick installation.



MINERAL WOOL PIPE SECTIONS MWPS with ALU foil

The pipe sections are laminated with a glass-fibre reinforced aluminium foil and have longitudinal slit for easy and quick installation. For a simple closure, pipe sections are provided with a double-sided adhesive tape with finger lift.



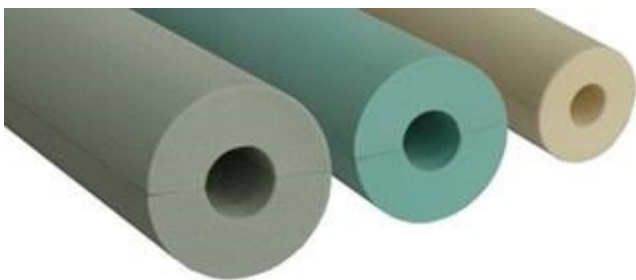
BLOW-IN INSULATION Isomat ISG-30

Isomat ISG-30 is a mineral wool blow-in insulation for attics, cavity walls and frame constructions. ISG-30 is a dry material, that adds no water to building, quick to install, easy to handle and ensures complete fill without settlement.



PRE-FABRICATED PIPE SECTIONS Isomat PreFab

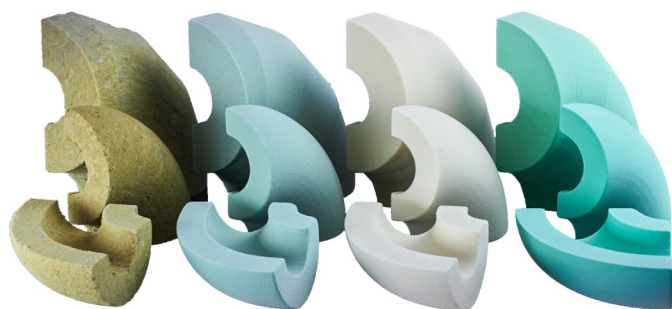
Isomat PreFab is a trapezoidal cut insulation board, produced to fit all standard pipe sizes from pipe diameter of 150 mm and larger. It's economic packaging enables effectively managing transportation cost and maximizing space saving storage.



POLYISOCYANURATE 33 PIPE SECTIONS

PIR33PS without ALU foil

Pipe insulation of the highest dimensional accuracy, cut out of the rigid polyurethane-polyisocyanurate (PIR) blocks. The pipe sections consist of two half-shells for easy and quick installation.



INSULATION ELBOWS

D3 or V-grooved insulation elbows

D3 insulation elbows are cut out of block in a single cut and deliverable as two half shells.

V-grooved insulation elbows are cut out of pipe sections, with longitudinal slit for easy and quick installation.



MINERAL WOOL WIRED MATS

WM

Compact, flexible wire mesh mats of mineral wool, stitched with galvanized wire mesh on one side. For thermal, acoustic and fire protection in all areas of technical insulation.



MINERAL WOOL LAMELLA MATS

LAM ALU

Lightweight, composite mineral wool lamellas with tear resistant glass fibre reinforced aluminium foil. For thermal, acoustic and fire protection of industrial installations, such as air-conditioning and ventilation ducts, pipelines containers and tank systems.

ISOMAT WOOL PRODUCTS



MINERAL WOOL PIPE SECTIONS un-laminated

Isomat Mineral Wool Pipe Sections, un-laminated, contribute to thermal savings and improve acoustic performance. The different internal diameters and different wall thickness are suitable for insulation of all types of pipelines, for heating and ventilation of various circular cross-sections. Longitudinal slit allows easy and quick installation.



MINERAL WOOL PIPE SECTIONS with ALU-foil

Isomat Mineral Wool Pipe Sections, ALU, with extremely durable and protective low vapour permeability aluminium foil, prevent condensation problems and help to provide effective vapour control. For simple closure the pipe sections are provided with a double-sided adhesive tape with finger lift.



MINERAL WOOL ELBOWS D3 and V-grooved

Isomat Mineral Wool Elbows, are significant for the insulation of sheet moldings and curves of heating and hot water pipes.

D3 un-laminated insulation elbows are cut out of mineral wool block in a single cut or different kinds of segments and deliverable as two half shells.

V-grooved insulation elbows with ALU-foil, are cut out of mineral wool pipe sections, laminated with a glass-fibre reinforced aluminium foil, with longitudinal slit for easy and quick installation.

EC-CERTIFICATES OF CONFORMITY: 0751-CPR.2-017.5-01

PRODUCT DATA SHEET

ISOMAT MWPS

Description:

Isomat MWPS are cut mineral wool pipe sections, unlaminated or laminated with ALU foil including adhesive tape on the overlap according to EN 14303:2009.

Application:

For simple insulating of pipes of all kinds, especially for:

- Technical equipment pipes (heat pumps, condensing units, industrial water, etc.)
- Pipelines in house and other buildings (central heating system, distant heating system, etc.)

PIPE SECTIONS CHARACTERISTIC	SYMBOL	VALUE	UNIT	Standard
MINERAL WOOL PIPE SECTIONS		75 - 90	kg/m ³	EN 14303:2009 + A1:2013
PIPE Ø FROM - TO		15 - 612	mm	Outside pipe diameter: < 150 mm: MW-EN 14308-T8 ≥ 150 mm: MW-EN 14303-T9
INSULATION THICKNESS FROM - TO		15 - 200	mm	
THERMAL BEHAVIOUR				
MEDIUM TEMP.		≤ 700	°C	EN 14707:2005
TEMPERATURE ALU SIDE		≤ 100	°C	
THERMAL CONDUCTIVITY	$\lambda_{40\text{ °C}}$	0,038	W/mK	EN 13787
THERMAL CONDUCTIVITY AT DIFFERENT MEDIUM TEMPERATURES	10 °C	0,034	W/mK	EN 13787
$\lambda_{N,R}$ by W/mK	20 °C	0,036		
	40 °C	0,038		
	60 °C	0,041		
	80 °C	0,043		
BEHAVIOUR IN FIRE				
UN-LAMINATED		A1 _L		EN 13501-1
LAMINATED WITH ALU FOIL		A2 _L -s1, d0		
MINERAL WOOL BLOCK CHARACTERISTIC	SYMBOL	VALUE	UNIT	Standard
BEHAVIOUR IN FIRE		A1 _L		EN 13501-1
THERMAL CONDUCTIVITY	$\lambda_{40\text{ °C}}$	0,035	W/mK	EN 12667
MELTING POINT		> 1000	°C	DIN 4102/T17
VAPOUR DIFFUSION	μ	1,2		EN 12086
AIRFLOW RESISTANCE	AF	> 25	KNs/m ⁴	EN 29053
WATER ABSORPTION	W _P	< 1	kg/m ²	EN 1609
	W _{IP}	< 3	kg/m ²	EN 12087
CHEMICAL PROPERTIES	AS-quality AGI Q 135 chemically neutral, does not rot, without silicone, RAL			

DECLARATION OF PERFORMANCE

ISOMAT MWPS

DOP NO.: DOP-MWPS-EN-2015-05-06

1.	Unique identification code of the product-type	ISOMAT pipe sections MWPS		
2.	Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4)	See product label		
3.	Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as	Factory made thermal insulation products for building equipment and industrial installations made of mineral wool (MW) according		
4.	Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5)	Isomat d.o.o. Celovška 3 SI-2392 Mežica	Telephone: Fax: E-mail: Web:	+386 (2) 82 793 11 +386 (2) 82 793 15 info@isomat.si www.isomat.si
5.	Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2)	Not relevant		
6.	System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V	System 1		
7.	In case of the declaration of performance concerning a construction product covered by a harmonised standard	The notified product certification body FIW München (no. 0751) performed the initial inspection of the manufacturing plant and of factory production control as well as continuous surveillance, assessment and evaluation of factory production control under system 1 and issued EC-Certificate of Conformity 0751-CPR.2-017.5-01		
8.	In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued	Not relevant		

9. Declared performance

ESSENTIAL CHARACTERISTICS

PERFORMANCE

HARMONISED TECHNICAL

BEHAVIOUR IN FIRE	Reaction to fire	RG90 ALU ¹⁾ :A2L-s1, d0	EN 14303:2009 + A1:2013
SOUND ABSORPTION INDEX	Sound absorption	NPD	
THERMAL RESISTANCE	Thermal conductivity Mass and limit zone mass	See Table A T8 and T9 ³⁾	
WATER VAPOUR PERMEABILITY	Water vapour diffusion resistance	MV1	
COMPRESSIVE STRENGTH	Compressive stress or compressive	NPD ⁴⁾	
CORROSIVE SUBSTANCES	Small amounts of water-soluble ion	NPD ⁴⁾	
RELEASE OF DANGEROUS SUBSTANCES	Discharge of dangerous substances	See ²⁾	
GLOW BEHAVIOUR	Glow behaviour	Fulfilled	
DURABILITY OF THE FIRE BEHAVIOUR UNDER	Properties of durability	NPD ⁴⁾	

ESSENTIAL CHARACTERISTICS

PERFORMANCE

HARMONISED TECHNICAL SPECIFICATION

DURABILITY OF THE HEAT TRANSFER
RESISTANCE UNDER THE INFLUENCE OF AGING/
DEGRADATION

Thermal conductivity
Mass and limit zone mass
Dimensional stability or upper temp.
the use of dimensional stability
Properties of durability

See Table A
T8 and T9³⁾
Fulfilled
ST(+) 700⁶⁾
Fulfilled

DURABILITY OF THE FIRE BEHAVIOUR UNDER
THE INFLUENCE OF HIGH TEMPERATURES

Properties of durability

Fulfilled

EN 14303:2009
+ A1:2013

DURABILITY OF THE HEAT TRANSFER
RESISTANCE UNDER THE INFLUENCE OF HIGH
TEMPERATURES

Properties of durability
Upper service temperature - dimension-
al stability

Fulfilled
ST(+) 700⁶⁾

1) ISOMAT pipe sections MW90PS ALU: mineral wool pipe sections, laminated with aluminium foil / ISOMAT pipe sections MW90PS UNL: mineral wool pipe sections, non-laminated. The density of mineral wool from 75 to ≤ 90 kg / m³, the inner diameter of 15-612 mm, thickness of insulation 15-200 mm, length 1000 mm.

2) Mineral wool meets the requirements of Association for Quality Assurance RAL and enhanced bio-degradability in accordance with the EU Directive. Mineral wool is

chemically neutral, it does not decompose, without silicone additives, upper operating temperature ≤ 700 ° C, melting point $\geq 1,000$ ° C.

3) The outer diameter < 150 mm: MW-EN 14303-T8, Outer diameter ≥ 150 mm MW-EN 14303-T9.

4) No performance Determined (for that product the information on the properties is not required).

5) Fire resistance of mineral wool products does not deteriorate over time. Classification of the product in a certain Euro-class relates to the content of inorganic composition, which over time can not be increased.

6) The thermal conductivity of products made of mineral wool in the course of time does not change. Experience has shown that the fibre structure is stable, and the porosity of not containing other gases, such as atmospheric air.

10. The performance of the product identified in points 1 and 2
is in conformity with the declared performance in point 9.
This declaration of performance is issued under the sole
responsibility of the manufacturer identified in point 4.

TABLE A

MEDIUM TEMPERATURE T_m in °C

NOMINAL VALUE OF THERMAL CONDUCTIVITY	10	20	30	40	50	60	70	80	90
IN W/mK	0,034	0,036	0,037	0,038	0,039	0,041	0,042	0,043	0,045

CERTIFICATE OF CONSTANCY OF PERFORMANCE

0751-CPR.2-017.5-01

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product

Factory made mineralwool (MW) products (details cf. annex)

placed on the market by

Isomat d.o.o.
Celovska 3
2392 MEZICA
Slovenia

and produced in the factory

Isomat d.o.o.
Celovska 3
2392 MEZICA
Slovenia

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performances described in Annex ZA of the standard

EN 14303:2009+A1:2013

under system 1 are applied and that

the essential characteristics of reaction to fire for the products fulfil all the prescribed requirements set out above

This certificate was first issued on 06.05.2015 and will remain valid as long as the test methods and/or factory production control requirements included in the harmonised standard (but no longer than 18.04.2017), used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly

Gräfelfing, 19.04.2016



Head of Certification Body

Dipl.-Ing. (FH) Wolfgang Albrecht

A publication of extracts or a referring to the Certificate of Constancy of Performance and its annex requires the prior written approval of FIW München.

ISOMAT ISG-30

BLOW-IN INSULATION

Blow in insulation represents the easiest way that begins saving energy and money the moment it is installed. It has the largest potential for reducing emissions over the course of the life of a building and offers many advantages to all who seek a highly effective, long-term and energy saving solution.

ISOMAT ISG-30 BENEFITS

- **Effectively reduces heating costs up to 50%**
- **Significantly reduces heat loss up to 70%**
- **No material loss**
- **Mineral wool blow-in insulation - nonflammable**
- **Water repellent**
- **Non-shrinking**
- **Permanently resistant**
- **Efficient insulation even with complex constructions**

CE



PRODUCT DATA SHEET

ISOMAT ISG-30

Description:

Isomat ISG-30 is a mineral wool blow-in insulation for attics, cavity walls and frame constructions. ISG-30 is a dry material, that adds no water to building, quick and clean to instal, easy to handle and it ensures a complete fill without settlement.

Advantages:

- non combustible A1
- good thermal insulation properties
- sound insulation
- diffusion-open
- water repellent
- controlled manufacturing quality

Application:

As a follow-up insulation for attics, cupolas, arches, ventilated flat roof, mansard roof, sloping roof, cavity walls and frame constructions

ISG-30 CHARACTERISTICS	SYMBOL	DESCRIPTION/VALUE	Standard
SCOPE	WZ	Cavity walls, attics, lofts, coupolas, arches, ventilated flat roof, sloping roof, cavity walls, etc.	
NON-COMBUSTIBLE		Class A1	DIN EN 13501-1
THERMAL CONDUCTIVITY MEASURED VALUE	λ_D λ	0,0381 W/mK 0,0353 W/mK	EN 14064-1:2010
MELTING POINT		>1000 °C	DIN 4102-17
BULK DENSITY		65 - 85 kg/m ³	
VAPOUR RESISTANCE	MU1	$\mu = 1,0$	DIN EN 12086

CERTIFICATES

CE - CERTIFICATE	0672-CPD-51140.01.09
VKF Brandschutzanwendung	Nr. 26162

DELIVERY METHOD

ISG-30 PACKING	WEIGHT	PALLET 1,2 x 1,2 x 2,6 m
Packed in transparent/white bags	18 kg/bag	30 bags = 540 kg/pallet



DECLARATION OF PERFORMANCE

ISOMAT ISG-30

DOP NO.: DOP-ISG30-E-2013-07-01				
1.	Unique identification code of the product-type		ISOMAT ISG-30	
2.	Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4)		See product label and marking on boards	
3.	Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer		Thermal insulation for buildings	
4.	Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5)		Isomat d.o.o. Celovška 3 SI-2392 Mežica	Telephone: +386 (2) 82 793 11 Fax: +386 (2) 82 793 15 E-mail: info@isomat.si Web: www.isomat.si
5.	Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2)		Not relevant	
6.	System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V		System 1	
7.	In case of the declaration of performance concerning a construction product covered by a harmonised standard		The notified product certification body Materialprüfungsanstalt Universität Stuttgart (no. 0672) performed the initial inspection of the manufacturing plant and of factory production control as well as continuous surveillance, assessment and evaluation of factory production control under system 1 and issued EC-Certificate of Conformity 0672-CPD-51140.01.09.	
8.	In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued		Not relevant	
9.	Declared performance			
ESSENTIAL CHARACTERISTICS		PERFORMANCE		HARMONISED TECHNICAL SPECIFICATION
REACTION TO FIRE		A1		DIN EN 13501-1
THERMAL CONDUCTIVITY		λ _D (W/mK)	0,038	DIN EN 14064-1:2010
CLASS FOR SETTLEMENT		S1		DIN EN 14064-1:2010
AIRFLOW RESISTIVITY		NPD		DIN EN 14064-1:2010
WATER ABSORPTION		WS		DIN EN 14064-1:2010
WDD		MU 1		DIN EN 14064-1:2010
DENSITY		Masonry	65-85 kg/m ³	DIN EN 14064-1:2010
		Vertical and inclined frame construction	70-85 kg/m ³	
		Horizontal frame construction	65-85 kg/m ³	
10.	The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.			

THERMAL CONDUCTIVITY AND RESISTANCE

ISG-30 CHARACTERISTICS	SYMBOL	DESCRIPTION/VALUE					
DENSITY	65 kg/m ³						
THERMAL CONDUCTIVITY	U	0,0381 W/mK					
THICKNESS	mm	100	150	200	250	300	
U-Value	W/m ² K	0,380	0,253	0,190	0,152	0,127	
R-Value	m ² K/W	2,632	3,947	5,263	6,579	7,895	
Coverage	kg/m ²	6,5	9,8	13	16,3	19,5	



Isomat ISG-30 is a product designed for insulation of attics, hollow walls and dry walls.

Installation of Isomat ISG-30 can be made by blowing or infilling in new buildings, or existing buildings as a retrofit solution.

Testing piled weight for blowing in open areas:

45 - 55 kg/m³





Notified body 0672

EC-CERTIFICATE OF CONFORMITY

0672 – CPD – 51140.01.09

In compliance with Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to the construction products (the Construction Products Directive or CPD), as later amended, it has been stated that the

construction product **„Isomat Steinwollegranulat ISG“
in-situ formed loose-fill mineral wool (MW) products
to annex 1 from 08.04.2013**

placed on the market by **ISOMAT d.o.o.
Celovška 3
2932 Mežica
SLOVENIA**

and produced in the factory **SLO-2932 Mežica (factory M)
SLOVENIA**

is submitted by the manufacturer to a factory production control and to the further testing of samples taken at the factory in accordance with a prescribed test plan and that the notified body **No. 0672 - Materialprüfungsanstalt Universität Stuttgart, MPA Stuttgart, Otto-Graf-Institut (FMPA)** - has performed the initial type-testing for the relevant characteristics of the product, the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control.

This certificate attests that all provisions concerning the attestation of conformity and the performances described in the Annex ZA of the standard

DIN EN 14064-1 : 2010

were applied and that the product fulfils all the prescribed requirements.

This certificate was first issued on 01.12.2011 and remains valid as long as the conditions laid down in the harmonised technical specification in reference or the manufacturing conditions in the factory or the FPC itself are not modified significantly.

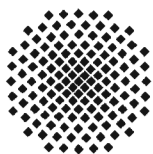
Stuttgart, 08.04.2013



Materialprüfungsanstalt
Universität Stuttgart
Division - Mineral Building Materials -
Unit - Thermal insulations -

(Akad. OR Dr. Popp)
Certification Representative

In case of doubt, the German text shall prevail.



Notified body 0672

Annex 1 Page 1
for EC-CERTIFICATE OF CONFORMITY
0672 – CPD – 51140.01.09
„Isomat Steinwollegranulat ISG“
in-situ formed loose-fill mineral wool (MW) products
ISOMAT d.o.o.
factory SLO-2932 Mežica (factory M)

Producer designation	Application	Density [kg/m³]	Declared thermal conductivity λ_D [W/(m·K)]	Class for settlement	Airflow resistivity	Water absorption	WDD	Fire classification acc. to DIN EN 13501-1
ISG	Masonry	65 – 85	0,038	S1	NPD	WS	MU 1	A1
ISG	vertical and inclined frame construction	70 – 85	0,038	S1	NPD	WS	MU 1	A1
ISG	horizontal frame construction	65 – 85	0,038	S1	NPD	WS	MU 1	A1

Stuttgart, 08.04.2013



Materialprüfungsanstalt
Universität Stuttgart
Division - Mineral Building Materials -
Unit - Thermal Insulations -


(Akad. OR Dr. Popp)
Certification Representative

In case of doubt, the German text shall prevail.

PreFab MW

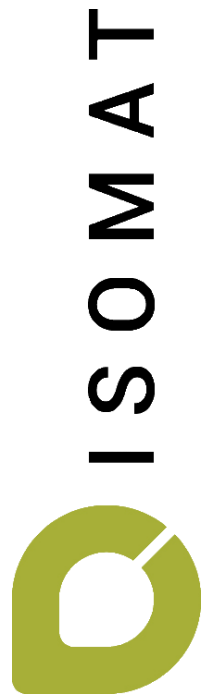
Technical data sheet

Isomat Industrial pipe sections - PreFab is factory trapezoidal cut mineral wool board. It ships flat in plastic and enables easy forming at the job site. Isomat Prefab is manufactured to specific pipe sizes and insulation thicknesses with a variety of facing options.

Isomat PreFab is produced to fit all standard pipe sizes, copper tubing sizes or all other pipe sizes from pipe diameter of 150 mm and larger.

Isomat PreFab is used for simple insulating of pipes of all kinds, especially for:

- technical equipment pipes
- pipelines in all kind of buildings (central / distant heating systems, etc.)
- pipelines in industry,...



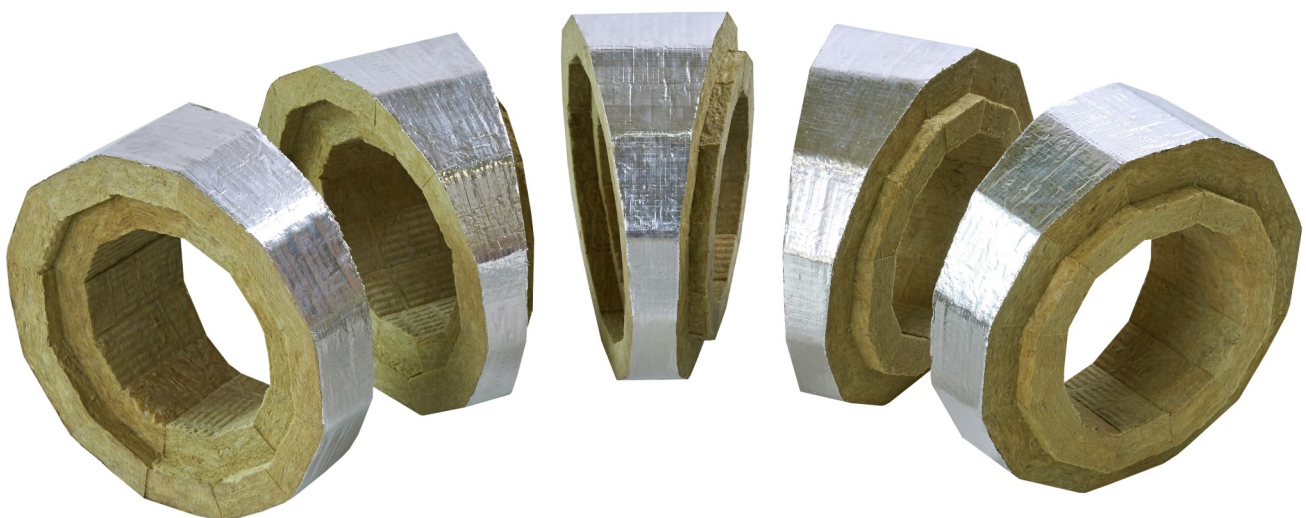
PIPE SECTIONS CHARACTERISTIC	SYMBOL	VALUE	UNIT	Standard
MINERAL WOOL - INDUSTRIAL PIPE SECTIONS		75 - 120 (150)	kg/m ³	EN ISO 8497
PIPE Ø FROM - TO		150 - ∞	mm	< 150 mm: MW-EN 14308-T8
INSULATION THICKNESS FROM - TO		30 - 200	mm	≥ 150 mm: MW-EN 14303-T9
THERMAL BEHAVIOUR - MEDIUM TEMP.		≤ 700	°C	
THERMAL BEHAVIOUR - TEMPERATURE ALU SIDE		≤ 100	°C	
THERMAL CONDUCTIVITY	$\lambda_{N,R}$	0,035	W/mK	Measured on the board
BEHAVIOUR IN FIRE		A2L-s1, d0		EN 13501-1
MELTING POINT		> 1000	°C	DIN 4102/T17
VAPOUR DIFFUSION	μ	1,2		EN 12086
AIRFLOW RESISTANCE	AF	> 25	KNs/m4	EN 29053
WATER ABSORPTION	W_p	< 1	kg/m ²	EN 1609
	W_{IP}	< 3	kg/m ²	EN 12087
CHEMICAL PROPERTIES	AS-quality AGI Q 135, Chemically neutral, does not rot, without silicone, RAL-in accordance with EC norm			
OTHER INSULATION MATERIALS	Foamglas, PUR/PIR, Phenolic foam, etc.			
FACING OPTIONS	ALU-foil, glass fibres, jacketing, etc.			

Isomat PreFab Elbow System with Shiplap

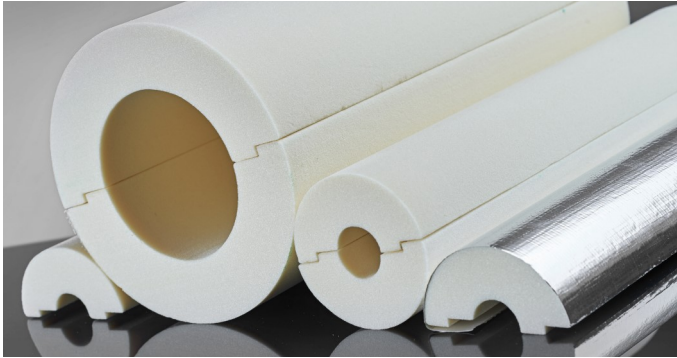


Isomat PreFab Elbow System with Shiplap is an advanced, high performance insulation solution, where pieces are fitted together for increased strength and stability. It prevents thermal bridging that occurs through discontinuities in the insulation material and helps to achieve uniform thermal resistance.

ADVANCED SOLUTION WITH FLEXIBLE ROBOTIC MANUFACTURING 3-D
INSULATING MATERIALS



ISOMAT PUR / PIR / PHENOL PRODUCTS



ISOMAT PUR

Pipe sections and elbows

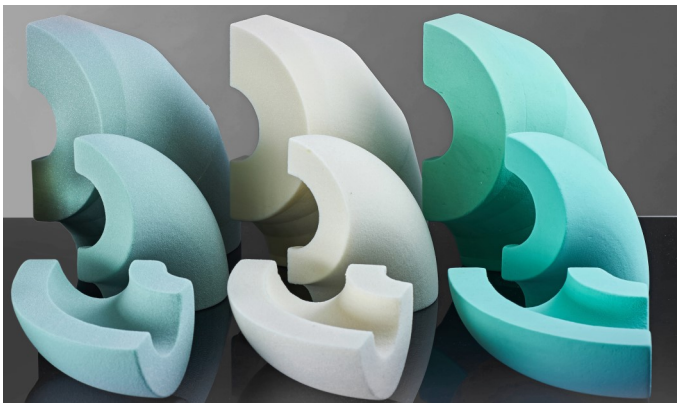
Isomat PUR (rigid polyurethane) pipe sections and elbows of the highest dimensional accuracy are based on polyurethane and consist of two half-shells for easy and quick installation. Developed to provide optimum performance to suit different performance specifications, with regards to insulation efficiency, environment, safety and cost.



ISOMAT PIR

Pipe sections and elbows

Isomat PIR (rigid polyisocyanurate) pipe sections and elbows are based on polyisocyanurate and are developed to provide the most thermally efficient insulation system with a close cell structure that effectively eliminates the risk of moisture. Each half-section is cut from a solid block ensuring the highest dimensional accuracy and thickness.



ISOMAT PHENOL

Pipe sections and elbows

Isomat Phenol pipe sections and elbows are lighter in weight, easy to transport, handle and install. They consist of two half-shells, each section cut from a rigid phenolic block ensuring that all circular sections are concentric and precisely matched for rope and thickness.

DIFFERENT JACKETINGS POSSIBLE. OTHER DENSITIES ON REQUEST.

PRODUCT DATA SHEET

MATERIAL

Material / Matériau:

POLYURETHAN PUR/PIR-HARTSCHAUM OHNE DECKSCHICHT

Rigid polyurethane PUR/PIR foam without coating / Mousse de polyuréthane PUR/PIR rigide sans recouvrement

QUALITÄT

Quality / Qualité

PIR: C Green 35

EIGENSCHAFT Property Propriétés	PRÜFVERFAHREN Test method Norme	EINHEIT Unit Unité	ANFORDERUNG Request Demande
ROHDICHTE Density / Densité	DIN EN 1602	kg/m ³	35
BRANDVERHALTEN Foam classification / Réaction au feu	DIN EN 13501-1 NF P 92-501 DIN 4102-1		C, s3, d0 M1
DRUCKFESTIGKEIT Compressive strength / Résistance à la compression	DIN EN 826	kPa	220
E-MODUL DRUCKFESTIGKEIT E-Modulus / E-Module	DIN EN 826	kPa	5500
QUERZUGFESTIGKEIT Tensile strength / Résistance à la traction	DIN EN 1607	kPa	220
E-MODUL QUERZUGFESTIGKEIT E-Modulus / E-Module	DIN EN 1607	kPa	5000
BIEGEFESTIGKEIT Traverse breaking strength / Résistance à la flexion	DIN EN 12089	kPa	220
SCHERFESTIGKEIT Shear strength / Résistance à la cisaillement	DIN EN 12090	kPa	110
GESCHLOSSENZELLIGKEIT Closed cell content / Cellules fermées	DIN ISO 4590	%	>95
WÄRMELEITFÄHIGKEIT BEI 10 °C Thermal conductivity at 10 °C / Conductibilité thermique à 10 °C	DIN EN 12667	W/mK	≤0,022
WASSERAUFNAHME Water absorption / Absorption d'eau	DIN EN 12087	%	Max. 3
DAUER-EINSATZTEMPERATUR Temperature range (continuous) / Températures limites (en continu)		°C	-80 / +120

Für die Rohdichte gilt eine Toleranz von ±10%.

Einzelwerte der Festigkeit können die Nennwerte bis zu 10 % unterschreiten.

Alle Festigkeitswerte beziehen sich auf die parallele Prüfrichtung.

Wärmeleitfähigkeitswerte sind nach DIN 12667, innerhalb 6 Wochen und 10 °C Mitteltemperatur, bestimmt.

For the density is a tolerance of ± 10 %.

Particular valuation items of strength can undercut the nominal value up to 10 %.

All strength values are based on the parallel test direction.

The values of thermal conductivity are defined in accordance to EN 12667 within 6 weeks at 10 °C average temperature.

Pour la densité il faut compter une tolérance de ±10%.

Toutes les valeurs de résistance sont basées sur l'orientation du test en parallèle.

Les valeurs individuelles de résistance peuvent être inférieures de 10 % maximum aux valeurs nominales.

Les valeurs de conductivité thermique sont définies selon la EN 12667 en 6 semaines à une température moyenne de 10°C.

BauderFOAM C 35

Polyurethan (PUR/PIR)-Hartschaum

Polyurethane rigid foam (PUR/PIR)

Mousse rigide de polyurethane (PUR/PIR)

Wärmedämmstoff für die technische Gebäudeausrüstung
und betriebstechnische Anlagen in der Industrie

Thermal insulation products for building equipment and industrial installations

Produits isolants thermiques pour l'équipement du bâtiment et les installations industrielles



Nr. Zertifizierte Prüfstelle: 0751

Notified body:

Bureau de contrôle certifié:

13

Leistungserklärung Nr.: 90410035

Declaration of performance Nr.:

Déclaration de performance Nr.:

Paul Bauder GmbH & Co. KG

Korntaler Landstrasse 63

70499 Stuttgart

EN 14308

RtF: C (EN 13501-1)

Wärmeleitfähigkeit initiiell bei 10 °C: 0,0022 W/(m*K)

Thermal conductivity at 10 °C:

Conductivité thermique à 10 °C:

PU - EN 14308 - ST(+)140 - DS(1)3 - DS(2)3 - CS(10)150

Dämmstoffblock zur Herstellung von Produkten nach EN 14308

Block insulation material for the manufacturing of products according to EN 14308

Bloc isolant pour la fabrication de produits suivant la EN 14308

Auftragsnummer:

Order number:

Commande numéro:

Positionsnummer:

Position number:

Position numéro:

Datum:

Date:

Date:

PRODUCT DATA SHEET

MATERIAL RIGID PHENOLIC INSULATION

QUALITY 40 kg/m³

PROPERTY	TEST METHOD	UNIT	REQUEST
DENSITY	BS4370	kg/m ³	40 ± 2
COMPRESSIVE STRENGTH - PARALLEL TO RISE	BS4370	kPa	180 ± 40
COMPRESSIVE STRENGTH - PERPENDICULAR TO RISE	BS4370	kPa	140 ± 40
TENSILE STRENGTH—PARALLEL TO RISE		kPa	200 ± 40
TENSILE STRENGTH—PERPENDICULAR TO RISE		kPa	180 ± 40
STEAM WATER TRANSMISSION SPEED	ISO 1663		
STEAM TRANSMISSION		g-mq. 24h	43,56
STEAM PERMEABILITY		nm-m.Pa.S	3,35
CLOSED CELL CONTENT	BS4370	%	Min. 95
THERMAL CONDUCTIVITY	BS4370	W/mK	0,021 ± 0,002
WATER ABSORPTION (20 °C, 96 hours)	ISO 2896	%	0,113
WEIGHT			0,045
VOLUME			
TEMPERATURE RANGE		°C	-180 ± 120
SPECIFIC HEAT		KJ/kg. C	1.88

CHEMISTRY AND CHEMICAL ENGINEERING DIVISION FIRE TECHNOLOGY DEPARTMENT (U.S.A.)

FUMI: ASTM E 84 Flame spread index (FSI): 23 - Smoke development index (SDI): 21

CSI BOLLATE (MI)

FIRE: test run with insulation material full view for sheathing of walls directly expose to fire;

Degree of reaction to fire: 1B (one B)

SMOKE: in conformity with the regulation NF F 16 - 101 table 4 - for smoke, it is classified as degree F1, with smoke index »I.F.«6,3.

FIRE TEST CLASSIFICATIONS

BS476 Part 6 and Part 7 - Results conform to Class 0 of the UK Building Regulations

Epiradiateur - M1

ASTM E84 25/50 Flame and Smoke - up to 3 inches thick

NEN 6065/6066 - Klasse 1/2

DIN 4102—B1

Other information:

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of ISOMAT d.o.o.. The data on this sheet relates only to the specific material designated herein. ISOMAT d.o.o. assumes no legal responsibility for use or reliance upon this data.

For information regarding specific applications of the product please contact ISOMAT d.o.o..



Technical data sheet Wired Mat WM 640 / WM 640 Alu

July 2016

Version: KITS-TDS-WM640_Alu_Web-0716-eng

DESCRIPTION

Wired Mat WM 640 is a medium density, non-combustible rock mineral wool mat. The standard Wired Mat WM 640 GG is supplied with galvanized steel mesh and stitched with galvanized steel wire. The mesh makes the Wired Mat a firm, but flexible insulation mattress, withstanding high operating temperatures.

Also available: Wired Mat WM 640 SG, WM 640 S and WM 640 Alu (GG, SG, S)

WM 640 SG: with galvanized steel mesh and stainless wire

WM 640 S: with stainless steel mesh and stainless wire

WM 640 Alu: with aluminium foil between the mineral wool surface and the wire mesh

APPLICATIONS

Wired Mat WM 640 is recommended for thermal, acoustic and fire insulation in various industrial and HVAC applications:

Pipes, components e.g. elbows/ T-pieces, valves and flanges, vessel walls, columns, power plant boilers, furnaces, flue gas ducts, district heating pipes, heat accumulators

Applicable with stainless, austenitic steel.

Note: Some countries might require application-specific tests of insulation products.

BENEFITS

- Plastic-belt as useful carrier
- Both-sided overlap of wire mesh (> 50mm iso)
- Sustainable product marking
- Stable plastic hoodie
- Resilient, strong and flexible
- Easy and quick to install
- Marine certified
- No deterioration of performance over time

CERTIFICATES



CE-Certificate: 0751-CPR.2-005.0-02 - ASTM C592 (for un-faced Wired Mats WM 640)

Wired Mat WM 640 / WM 640 Alu

Properties	Symbol	Description/Data								Unit	Test method/ Standards
Reaction to fire		non- combustible / A1									EN 13501-1
Thermal conductivity in relation to temperature	ϑ	50	100	200	300	400	500	600	°C	AGI Q 132	
	λ	0,040	0,046	0,063	0,085	0,113	0,148	0,195	W/(m·K)	EN 12667	
Maximum service temperature	ST(+)	≤ 640								°C	AGI Q 132 EN 14706
AS-Quality	---	≤ 10								ppm	AGI Q 132 EN 13468
Water vapour diffusion resistance value	μ	1								-	EN 12086
Water absorption	Wp	≤ 1,0								kg/m ²	AGI Q 132 EN 1609
Melting point of fibres	---	≥ 1.000								°C	DIN 4102-17
Silicone free	Produced without addition of silicone oil									---	
Longitudinal air flow resistance		≥ 40								k Pa·s/m ²	
Designation code	10.01.02.64.08 MW EN 14303-T2-ST(+)-640-WS1-CL10									AGI EN 14303	

Product range:

Thickness:	30 - 120 mm
Length:	2.000 - 6.000 mm
Width:	500 - 1.000 mm

Declared material properties are obtained in the production process and ensured by the factory production control in accordance with the European Standard at the time of manufacture.
Observing storage and handling guidelines will maintain performance within published tolerances.

Handling & storage

Our products are easy to handle and to install. They are supplied wrapped in polyethylene foil which is designed for short term protection only. For longer term protection on site, it is recommended to store them either indoors or under a roof and off the ground. Product information is mentioned on every pack. We recommend to contact our sales representatives if you intend to use Wired Mats on smaller diameter pipes to ensure an appropriate insulation.

Declaration of performance

<http://dopki.com/T4305DP>



Go to product



Headoffice

Technical Solutions Europe
Knauf Insulation GmbH
Parking 15-17
D-85748 Garching bei München

Production Plant

Knauf Insulation d.o.o.
Novi Marof
Croatia

www.knaufinsulation-ts.com

Declaration of Performance

T4305EPCPR

1. Unique Identification code of the product-type:
WM 640 GG, WM 640 GS, WM 640 S, WM 640 ALU GG, WM 640 ALU SG, WM 640 ALU S, FM D80 CB, FM D80 CB AluR.
2. Type, Batch or serial number or any other element allowing identification of the technical product as required under article 11(4) of the CPR:
See Product Label.
3. Intended use or uses of the technical product , in accordance with the applicable harmonised technical specification foreseen by the manufacturer:
Thermal Insulation products for building equipment and industrial installations.
EN 14303:2009 + A1:2013
4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):
Knauf Insulation
Am Bahnhof 7, 97346 Iphofen,
Deutschland
www.knaufinsulation.com
Contact: dop@knaufinsulation.com
5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):
Not applicable.
6. System or systems of assessment and verification of constancy of performance of the technical products as set out in Annex V:
 - System 1: reaction to fire
 - System 3: Internal measurements for mechanical and thermal properties.
7. In case of the declaration of performance concerning the technical products covered by a harmonised standard:
Notified body No. 0751 performed the initial inspection of the manufacturing evaluation of factory production control, and issued the certificate of constancy of performance for reaction to fire.
8. In case of the declaration of performance concerning the technical products for which a European Technical Assessment has been issued:
Not applicable.

9. Declared Performances:

T4305EPCPR				
Essential characteristics	Harmonised Standard	WM 640 GG	WM 640 GS	WM 640 S
Form		Wired mat	Wired mat	Wired mat
Description		Medium density, non-combustible mineral wool wired mat with galvanized steel mesh and galvanized stitching wire	Medium density, non-combustible mineral wool wired mat with galvanized steel mesh and stainless stitching wire	Medium density, non-combustible mineral wool wired mat with stainless steel mesh and stainless stitching wire
Produced on		Line 1	Line 1	Line 1
Nominal thickness (mm)	4.2.2.1	30-120 Load: 1000 Pa	30-120 Load: 1000 Pa	30-120 Load: 100 Pa
Reaction to fire	4.2.4	A1	A1	A1
Continuous glowing combustion	4.3.10	NPD	NPD	NPD
Designation code		MW EN14303-T2-ST(+)640-WS1-CL10	MW EN14303-T2-ST(+)640-WS1-CL10	MW EN14303-T2-ST(+)640-WS1-CL10
Thermal conductivity group		TC5	TC5	TC5
Additional performance		Acoustic	Acoustic	Acoustic
Dimensional stability	4.2.3	NPD	NPD	NPD
Compression Stress	4.3.4	NPD	NPD	NPD
Sound absorption	4.3.8	NPD	NPD	NPD
Release of dangerous substances	4.3.9	NPD	NPD	NPD
Durability Characteristics	4.2.5	NPD	NPD	NPD
Dimensions and tolerances	4.2.2	T2	T2	T2
Water vapour diffusion resistance	4.3.6	NPD	NPD	NPD
Trace quantities of water soluble ions and pH- value	4.3.7	CL10	CL10	CL10
Thermal conductivity (W/mk) at Temperature in °C	50	4.2.1	0,040	0,040
	100		0,046	0,046
	150		NPD	NPD
	200		0,063	0,063
	250		NPD	NPD
	300		0,085	0,085
	350		NPD	NPD
	400		0,113	0,113
	450		NPD	NPD
	500		0,148	0,148
	550		NPD	NPD
	600		0,195	0,195
	650		NPD	NPD
	700		NPD	NPD

T4305EPCPR					
Essential characteristics		Harmonised Standard	WM 640 Alu GG	WM 640 Alu GS	WM 640 Alu S
Form			Wired mat	Wired mat	Wired mat
Description			Medium density, non-combustible mineral wool wired mat with galvanized steel mesh and galvanized stitching wire with inlaid aluminium foil	Medium density, non-combustible mineral wool wired mat with galvanized steel mesh and stainless stitching wire with inlaid aluminium foil	Medium density, non-combustible mineral wool wired mat with stainless steel mesh and stainless stitching wire with inlaid aluminium foil
Produced on			Line 1	Line 1	Line 1
Nominal thickness (mm)		4.2.2.1	30-120 Load: 1000 Pa	30-120 Load: 1000 Pa	30-120 Load: 1000 Pa
Reaction to fire		4.2.4	A1	A1	A1
Continuous glowing combustion		4.3.10	NPD	NPD	NPD
Designation code			MW EN14303-T2-ST(+)640-WS1-CL10	MW EN14303-T2-ST(+)640-WS1-CL10	MW EN14303-T2-ST(+)640-WS1-CL10
Thermal conductivity group			TC5	TC5	TC5
Additional performance			Acoustic	Acoustic	Acoustic
Dimensional stability		4.2.3	NPD	NPD	NPD
Compression Stress		4.3.4	NPD	NPD	NPD
Sound absorption		4.3.8	NPD	NPD	NPD
Release of dangerous substances		4.3.9	NPD	NPD	NPD
Durability Characteristics		4.2.5	NPD	NPD	NPD
Dimensions and tolerances		4.2.2	T2	T2	T2
Water vapour diffusion resistance		4.3.6	NPD	NPD	NPD
Trace quantities of water soluble ions and pH- value		4.3.7	CL10	CL10	CL10
Thermal conductivity (W/mk) at Temperature in °C	50	4.2.1	0,040	0,040	0,040
	100		0,046	0,046	0,046
	150		NPD	NPD	NPD
	200		0,063	0,063	0,063
	250		NPD	NPD	NPD
	300		0,085	0,085	0,085
	350		NPD	NPD	NPD
	400		0,113	0,113	0,113
	450		NPD	NPD	NPD
	500		0,148	0,148	0,148
	550		NPD	NPD	NPD
	600		0,195	0,195	0,195
	650		NPD	NPD	NPD
	700		NPD	NPD	NPD

T4305EPCPR				
Essential characteristics		Harmonised Standard	FM D80 CB	FM D80 CB AluR
Form			Felt Mat	Felt Mat
Description			Non-combustible mineral wool felt mat produced with low binder content	Non-combustible mineral wool felt mat produced with low binder content faced with reinforced aluminium foil on one side
Produced on			Line 1	Line 1
Nominal thickness (mm)		4.2.2.1	30-100 Load: 50 Pa	30-100 Load: 50 Pa
Reaction to fire		4.2.4	A1	A1
Continuous glowing combustion		4.3.10	NPD	NPD
Designation code			MW EN14303-T2-ST(+)640-WS1-CL10	MW EN14303-T2-ST(+)640-WS1-MV1-CL10
Thermal conductivity group			TC5	TC5
Additional performance			Acoustic	Acoustic
Dimensional stability		4.2.3	NPD	NPD
Compression Stress		4.3.4	NPD	NPD
Sound absorption		4.3.8	NPD	NPD
Release of dangerous substances		4.3.9	NPD	NPD
Durability Characteristics		4.2.5	NPD	NPD
Dimensions and tolerances		4.2.2	T2	T2
Water vapour diffusion resistance		4.3.6	NPD	NPD
Trace quantities of water soluble ions and pH- value		4.3.7	CL10	CL10
Thermal conductivity (W/mk) at Temperature in °C	50	4.2.1	0,040	0,040
	100		0,046	0,046
	150		NPD	NPD
	200		0,063	0,063
	250		NPD	NPD
	300		0,085	0,085
	350		NPD	NPD
	400		0,113	0,113
	450		NPD	NPD
	500		0,148	0,148
	550		NPD	NPD
	600		0,195	0,195
	650		NPD	NPD
	700		NPD	NPD

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Ivan Zagorec – Plant Manager
(Name and function)



Novi Marof – 16/01/2015
(Place and date of issue)

(Signature)



Technical data sheet Wired Mat WM 660 / WM 660 Alu

July 2016

Version: KITS-TDS-WM660_Alu_Web-0716-eng

DESCRIPTION

Wired Mat WM 660 is a high density, non-combustible rock mineral wool mat. The standard Wired Mat WM 660 GG is supplied with galvanized steel mesh and stitched with galvanized steel wire. The mesh makes the Wired Mat a firm, but flexible insulation mattress, withstanding high operating temperatures.

Also available: Wired Mat WM 660 SG, WM 660 S and WM 660 Alu (GG, SG, S)

WM 660 SG: with galvanized steel mesh and stainless wire

WM 660 S: with stainless steel mesh and stainless wire

WM 660 Alu: with aluminium foil between the mineral wool surface and the wire mesh

APPLICATIONS

Wired Mat WM 660 is recommended for thermal, acoustic and fire insulation in various industrial and HVAC applications:

Pipes, components e.g. elbows/ T-pieces, valves and flanges, vessel walls, columns, power plant boilers, furnaces, flue gas ducts, district heating pipes, heat accumulators

Applicable with stainless, austenitic steel.

Note: Some countries might require application-specific tests of insulation products.

BENEFITS

- Plastic-belt as useful carrier
- Both-sided overlap of wire mesh (> 50mm iso)
- Sustainable product marking
- Stable plastic hoodie
- Resilient, strong and flexible
- Easy and quick to install
- Marine certified
- No deterioration of performance over time

CERTIFICATES



CE-Certificate: 0751-CPR.2-005.0-02 - ASTM C592 (for un-faced Wired Mats WM 660)

Wired Mat WM 660 / WM 660 Alu

Properties	Symbol	Description/Data								Unit	Test method/ Standards
Reaction to fire		non- combustible / A1									EN 13501-1
Thermal conductivity in relation to temperature	ϑ	50	100	200	300	400	500	600	650	°C	AGI Q 132
	λ	0,040	0,046	0,061	0,080	0,104	0,134	0,167	0,205	W/(m·K)	EN 12667
Maximum service temperature	ST(+)	≤ 660								°C	AGI Q 132 EN 14706
AS-Quality	---	≤ 10								ppm	AGI Q 132 EN 13468
Water vapour diffusion resistance value	μ	1								-	EN 12086
Water absorption	W _p	≤ 1,0								kg/m ²	AGI Q 132 EN 1609
Melting point of fibres	---	≥ 1.000								°C	DIN 4102-17
Silicone free		Produced without addition of silicone oil									---
Longitudinal air flow resistance		≥ 50								k Pa·s/m ²	
Designation code		10.01.03.66.10 MW EN 14303-T2-ST(+)-660-WS1-CL10									AGI EN 14303

Declaration of performance

<http://dopki.com/T4305DP>



Go to product



Product range:

Thickness:	30 - 120 mm
Length:	2.000 - 6.000 mm
Width:	500 - 1.000 mm

Declared material properties are obtained in the production process and ensured by the factory production control in accordance with the European Standard at the time of manufacture.
Observing storage and handling guidelines will maintain performance within published tolerances.

Handling & storage

Our products are easy to handle and to install. They are supplied wrapped in polyethylene foil which is designed for short term protection only. For longer term protection on site, it is recommended to store them either indoors or under a roof and off the ground. Product information is mentioned on every pack. We recommend to contact our sales representatives if you intend to use Wired Mats on smaller diameter pipes to ensure an appropriate insulation.

Headoffice

Technical Solutions Europe
Knauf Insulation GmbH
Parking 15-17
D-85748 Garching bei München

Production Plant

Knauf Insulation d.o.o.
Novi Marof
Croatia

www.knaufinsulation-ts.com

Declaration of Performance

T4305FPCPR

1. Unique Identification code of the product-type:
WM 660 GG, WM 660 SG, WM 660 S, WM 660 ALU GG, WM 660 ALU SG, WM 660 ALU S, FM D100 CB, FM D100 CB AluR.
2. Type, Batch or serial number or any other element allowing identification of the technical product as required under article 11(4) of the CPR:
See Product Label.
3. Intended use or uses of the technical product , in accordance with the applicable harmonised technical specification foreseen by the manufacturer:
Thermal Insulation products for building equipment and industrial installations.
EN 14303:2009 + A1:2013
4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):
Knauf Insulation
Am Bahnhof 7, 97346 Iphofen,
Deutschland
www.knaufinsulation.com
Contact: dop@knaufinsulation.com
5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):
Not applicable.
6. System or systems of assessment and verification of constancy of performance of the technical products as set out in Annex V:
 - System 1: reaction to fire
 - System 3: Internal measurements for mechanical and thermal properties.
7. In case of the declaration of performance concerning the technical products covered by a harmonised standard:
Notified body No. 0751 performed the initial inspection of the manufacturing evaluation of factory production control, and issued the certificate of constancy of performance for reaction to fire.
8. In case of the declaration of performance concerning the technical products for which a European Technical Assessment has been issued:
Not applicable.

9. Declared Performances:

T4305FPCPR					
Essential characteristics		Harmonised Standard	WM 660 GG	WM 660 SG	WM 660 S
Form			Wired mat	Wired mat	Wired mat
Description			High density, non-combustible mineral wool wired mat with galvanized steel mesh and galvanized stitching wire	High density, non-combustible mineral wool wired mat with galvanized steel mesh and stainless stitching wire	High density, non-combustible mineral wool wired mat with stainless steel mesh and stainless stitching wire
Produced on			Line 1	Line 1	Line 1
Nominal thickness (mm)		4.2.2.1	30-120 Load: 1000 Pa	30-120 Load: 1000 Pa	30-120 Load: 100 Pa
Reaction to fire		4.2.4	A1	A1	A1
Continuous glowing combustion		4.3.10	NPD	NPD	NPD
Designation code			MW EN14303-T2-ST(+)660-WS1-CL10	MW EN14303-T2-ST(+)660-WS1-CL10	MW EN14303-T2-ST(+)660-WS1-CL10
Thermal conductivity group			TC6	TC6	TC6
Additional performance			Acoustic	Acoustic	Acoustic
Dimensional stability		4.2.3	NPD	NPD	NPD
Compression Stress		4.3.4	NPD	NPD	NPD
Sound absorption		4.3.8	NPD	NPD	NPD
Release of dangerous substances		4.3.9	NPD	NPD	NPD
Durability Characteristics		4.2.5	NPD	NPD	NPD
Dimensions and tolerances		4.2.2	T2	T2	T2
Water vapour diffusion resistance		4.3.6	NPD	NPD	NPD
Trace quantities of water soluble ions and pH- value		4.3.7	CL10	CL10	CL10
Thermal conductivity (W/mk) at Temperature in °C	50	4.2.1	0,040	0,040	0,040
	100		0,046	0,046	0,046
	150		NPD	NPD	NPD
	200		0,061	0,061	0,061
	250		NPD	NPD	NPD
	300		0,080	0,080	0,080
	350		NPD	NPD	NPD
	400		0,104	0,104	0,104
	450		NPD	NPD	NPD
	500		0,134	0,134	0,134
	550		NPD	NPD	NPD
	600		0,167	0,167	0,167
	650		0,205	0,205	0,205
	700		NPD	NPD	NPD

T4305FPCPR					
Essential characteristics		Harmonised Standard	WM 660 ALU GG	WM 660 ALU SG	WM 660 ALU S
Form			Wired mat	Wired mat	Wired mat
Description			High density, non-combustible mineral wool wired mat with galvanized steel mesh and galvanized stitching wire with inlaid aluminium foil	High density, non-combustible mineral wool wired mat with galvanized steel mesh and stainless stitching wire with inlaid aluminium foil	High density, non-combustible mineral wool wired mat with stainless steel mesh and stainless stitching wire with inlaid aluminium foil
Produced on			Line 1	Line 1	Line 1
Nominal thickness (mm)		4.2.2.1	30-120 Load: 1000 Pa	30-120 Load: 1000 Pa	30-120 Load: 1000 Pa
Reaction to fire		4.2.4	A1	A1	A1
Continuous glowing combustion		4.3.10	NPD	NPD	NPD
Designation code			MW EN14303-T2-ST(+)/660-WS1-CL10	MW EN14303-T2-ST(+)/660-WS1-CL10	MW EN14303-T2-ST(+)/660-WS1-CL10
Thermal conductivity group			TC6	TC6	TC6
Additional performance			Acoustic	Acoustic	Acoustic
Dimensional stability		4.2.3	NPD	NPD	NPD
Compression Stress		4.3.4	NPD	NPD	NPD
Sound absorption		4.3.8	NPD	NPD	NPD
Release of dangerous substances		4.3.9	NPD	NPD	NPD
Durability Characteristics		4.2.5	NPD	NPD	NPD
Dimensions and tolerances		4.2.2	T2	T2	T2
Water vapour diffusion resistance		4.3.6	NPD	NPD	NPD
Trace quantities of water soluble ions and pH- value		4.3.7	CL10	CL10	CL10
Thermal conductivity (W/mk) at Temperature in °C	50	4.2.1	0,040	0,040	0,040
	100		0,046	0,046	0,046
	150		NPD	NPD	NPD
	200		0,061	0,061	0,061
	250		NPD	NPD	NPD
	300		0,080	0,080	0,080
	350		NPD	NPD	NPD
	400		0,104	0,104	0,104
	450		NPD	NPD	NPD
	500		0,134	0,134	0,134
	550		NPD	NPD	NPD
	600		0,167	0,167	0,167
	650		0,205	0,205	0,205
	700		NPD	NPD	NPD

Essential characteristics		Harmonised Standard	FM D100 CB	FM D100 CB AluR
Form			Felt Mat	Felt Mat
Description			Non-combustible mineral wool felt mat produced with low binder content	Non-combustible mineral wool felt mat produced with low binder content faced with reinforced aluminium foil on one side
Produced on			Line 1	Line 1
Nominal thickness (mm)		4.2.2.1	30-100 Load: 50 Pa	30-100 Load: 50 Pa
Reaction to fire		4.2.4	A1	A1
Continuous glowing combustion		4.3.10	NPD	NPD
Designation code			MW EN14303-T2-ST(+)-660-WS1-CL10	MW EN14303-T2-ST(+)-660-WS1-MV1-CL10
Thermal conductivity group			TC6	TC6
Additional performance			Acoustic	Acoustic
Dimensional stability		4.2.3	NPD	NPD
Compression Stress		4.3.4	NPD	NPD
Sound absorption		4.3.8	NPD	NPD
Release of dangerous substances		4.3.9	NPD	NPD
Durability Characteristics		4.2.5	NPD	NPD
Dimensions and tolerances		4.2.2	T2	T2
Water vapour diffusion resistance		4.3.6	NPD	NPD
Trace quantities of water soluble ions and pH- value		4.3.7	CL10	CL10
Thermal conductivity (W/mk) at Temperature in °C	50	4.2.1	0,040	0,040
	100		0,046	0,046
	150		NPD	NPD
	200		0,061	0,061
	250		NPD	NPD
	300		0,080	0,080
	350		NPD	NPD
	400		0,104	0,104
	450		NPD	NPD
	500		0,134	0,134
	550		NPD	NPD
	600		0,167	0,167
	650		0,205	0,205
	700		NPD	NPD

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Ivan Zagorec – Plant Manager
(Name and function)



Novi Marof – 16/01/2015
(Place and date of issue)

(Signature)



May 2016

Lamella Forte LMF AluR

Description

Lamella Mat Forte LMF AluR is a medium density, non-combustible rock mineral wool roll with a tear resistant glass fibre reinforced aluminium foil. The vertical orientation of the rock mineral wool lamellas ensures good compressive strength, while keeping flexibility and ease of handling. It is available in thicknesses from 20 mm to 120 mm.

Application

Lamella Mat Forte LMF AluR is recommended for thermal and fire insulation for technical equipment applications such as:

- | | |
|--------------------|-----------------|
| • Pipe works | • Tanks |
| • Large containers | • Vessels |
| • Duct works | • Heat storages |

Note: Some countries might require application-specific tests of insulation products

Performance

Thermal insulation

Lamella Mat Forte LMF AluR offers superior thermal insulation up to 300 °C

Fire behaviour

Lamella Mat Forte LMF AluR is classified as non-combustible to class A1

Max. service temperature (MST)

Lamella Mat Forte LMF AluR has a maximum service temperature of 300 °C

Benefits

- Non-combustibility
- Chemically inert
- Water repellent
- No deterioration of performance over time
- Resilient, strong and flexible
- Easy and quick to install
- Easy to cut

Lamella Forte LMF AluR

Properties	Symbol	Description/Data						Unit	Test method/Standards
Reaction to fire	—	non-combustible, A1						—	EN 13501-1
Thermal conductivity in relation to temperature*	ϑ	50	100	150	200	250	300	°C	EN 12667
	λ	0,044	0,054	0,067	0,083	0,104	0,130	W/(m·K)	
Maximum service temperature*	ST(+)	300**						°C	EN 14706
AS-Quality*	—	≤ 10						ppm	EN 13468
Water vapour diffusion resistance value	s _d	> 100						m	EN 12086
Water absorption*	W _p	≤ 1,0 (WS1)						kg/m²	EN 1602
Melting point of fibres	—	≥ 1000						°C	DIN 4102-17
Silicone free	—	Produced without addition of silicone oil							
Designation code	—	10.02.02.30.04						—	AGI Q 132
		MW-EN14303-T5-ST(+)-300-WS1-MV1-CL10							EN 14303

* VDI 2055 monitored

** aluminium side ≤ 80 °C

Delivery programme

Thickness (mm)	20	25	30	40	50	60	70	80	100
Length (mm)	10000	10000	10000	8000	6000	5000	4000	3500	2500
Width (mm)	500 oder 1000*								

* price adaption

Handling & storage

Lamella Mat LMH AluR is easy to handle and easy to install. It is supplied wrapped in polyethylene foil which is designed for short term protection only. For longer term protection on site, it is recommended to store the product either indoors or under a roof and off the ground. Product information is mentioned on every pack.



Headoffice Technical Solutions Europe

Knauf Insulation GmbH
 Parking 15-17
 D-85748 Garching bei München

Production plant

Knauf Insulation d.o.o.
 Novi Marof
 Croatia

www.knaufinsulation-ts.com



<http://dopki.com/T4305HP>

Declaration of Performance

T4305HPCPR

1. Unique Identification code of the product-type:
Lamella Mat Forte LMF AluR.
2. Type, Batch or serial number or any other element allowing identification of the technical product as required under article 11(4) of the CPR:
See Product Label.
3. Intended use or uses of the technical product , in accordance with the applicable harmonized technical specification foreseen by the manufacturer:
Thermal Insulation products for building equipment and industrial installations.
EN 14303:2009 + A1:2013
4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):
Knauf Insulation
Am Bahnhof 7, 97346 Iphofen,
Deutschland
www.knaufinsulation.com
Contact: dop@knaufinsulation.com
5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):
Not applicable.
6. System or systems of assessment and verification of constancy of performance of the technical products as set out in Annex V:
 - System 1: reaction to fire
 - System 3: Internal measurements for mechanical and thermal properties.
7. In case of the declaration of performance concerning the technical products covered by a harmonized standard:
Notified body No. 0751 performed the initial inspection of the manufacturing evaluation of factory production control, and issued the certificate of constancy of performance for reaction to fire.
8. In case of the declaration of performance concerning the technical products for which a European Technical Assessment has been issued:
Not applicable.

9. Declared Performances:

T4305HPCPR			
Essential characteristics		Harmonized Standard	Lamella Mat Forte LMF AluR
Form			Lamella Mat
Type			Lamella Mat Forte LMF AluR
Description			Non-combustible mineral wool lamella mat onto reinforced aluminium foil
Produced on			LAM 1
Nominal thickness (mm)		EN 823	20-140 Load: 250 Pa
Reaction to fire		EN 13501-1	A1
Continuous glowing combustion		4,3,10	NPD
Designation code			MW EN14303-T4-ST(+)-300-WS1-MV1-CL10
Thermal conductivity group			TC8
Additional performance			NPD
Dimensional stability		4,2,3	NPD
Compression Stress		4.3.4	NPD
Sound absorption		4.3.8	NPD
Release of dangerous substances		4.3.9	NPD
Durability Characteristics		4.2.5	NPD
Dimensions and tolerances		4.2.2	T4
Water vapour diffusion resistance		4.3.6	MV1
Trace quantities of water soluble ions and pH- value		4.3.7	CL10
Thermal conductivity (W/mk) at Temperature in °C	50	4.2.1	0,044
	100		0,054
	150		0,067
	200		0,083
	250		0,104
	300		0,130
	350		NPD
	400		NPD
	450		NPD
	500		NPD
	550		NPD
	600		NPD
	650		NPD
	700		NPD

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Ivan Zagorec – Plant Manager
(Name and function)



Novi Marof – 21/01/2016
(Place and date of issue)

(Signature)



Novembre 2014

Loose Wool LW

Description

Loose wool LW can be used for operating temperatures up to 800 °C and is a non-combustible resin free rock mineral wool. The flexibility of the product allows for installation in irregular shaped constructions and spaces where it is not practical to use a bonded product.

Application

Loose wool LW is recommended for insulation in applications such as:

- | | |
|--|---|
| <ul style="list-style-type: none"> • Ovens • Cavities • Pipe bends • Insulation mattresses | <ul style="list-style-type: none"> • Valve boxes • Non-regular units • Areas that are not easy to access |
|--|---|

Performance

Fire behaviour

Loose Wool LW is classified as non-combustible to class A1

Thermal insulation

Loose Wool LW has a thermal conductivity of 0,037 W/mK at 50 °C

Max. service temperature

Loose Wool LW has a max. service temperature of 800 °C

Benefits

- Flexible
- Non-combustible
- Resistant to high temperatures
- Water repellent
- Sound absorbing
- No deterioration of performance over time

Loose Wool LW

Properties	Symbol	Description / Data						Unit	Test method Standards
Maximum service temperature	ST(+)	750			800			°C	AGI Q132 EN 14706
Thermal conductivity in relation to temperature	ϑ	50	100	200	300	400	450	°C	EN 12667
	λ	0,037	0,044	0,060	0,080	0,107	0,123	W/(m·K)	
Installed density	ρ	~ 100			~ 150			kg/m³	
Designation code	—	10.10.03.75.10			10.10.03.80.15			—	AGI Q132
AS-Quality*	—	< 10						mg/kg	AGI Q132 EN 13468
Water absorption	W _p	≤ 1,0						EN 1609	AGI Q 132
Reaction to fire	—	A1						—	EN 13501-1
Melting point of fibres	—	≥ 1000						°C	DIN 4102-17
Water vapour diffusion resistance factor	μ	1						—	EN 12086
Silicone free	—	Produced without addition of silicone oil						—	

* AS-Quality on request

Delivery programme

Delivery: Loose Wool is delivered in poly-bags as a rolled felt.

Packaging: PE – bags on pallet

Content per bag: 10 kg

Transport volume: 35 bags on pallet

Other package sizes are available on request.

Thickness of wool-felt: ≥ 20mm (typically 40mm) - class T1 (accdg. EN 14303)

Length of wool-felt: ≥ 2.000mm (typically 2.500 - 3.500mm)

Standard width of wool-felt: 1.000 mm (manual adjustment to reasonable dimensions possible)

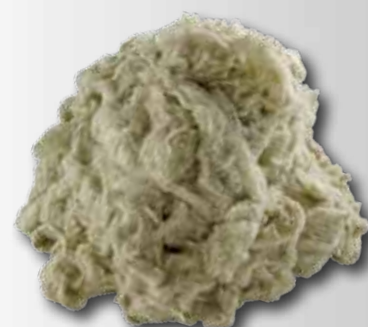
Handling & storage

Loose Wool LW is easy to handle and install.

It is supplied in bags which are designed for short term protection only.

For longer term protection on site, it is recommended to store the product either indoors, or under cover and off the ground.

Loose Wool LW should not be left permanently exposed to the elements.



Headoffice Technical Solutions Europe

Knauf Insulation GmbH

Parking 15-17

D-85748 Garching bei München

Production Plant

Knauf Insulation d.o.o.

Skofja Loka

Slovenia

www.knaufinsulation-ts.com



ISOMAT d.o.o.
Celovška 3
SI-2392 Mežica

info@isomat.si
www.isomat.si

