

KIMMCO

means insulation!

KIMMCO Marine Insulation (KMI)



www.kimmcoinsulation.com

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MANUFACTURED
UNDER LICENSE OF
ISOVER
SAINT-GOBAIN

KIMMCO Marine Insulation (KMI)

APPLICATIONS

For thermal and / or acoustic insulation.

DESCRIPTION

KIMMCO Marine Insulation is manufactured from stable glass fibers bonded with thermosetting resins. They are light in weight, strong, resilient and easy to handle.

Standard Dimensions

Thickness(mm)	Width(m)	Length(m)
25	0.4,0.6,1.0,1.2	10 to 45 according to the thickness & density
40	"	
50	"	
75	"	
100	"	
150	"	
200	"	

Non-standard sizes may be available on request. Thickness depends upon density.

Nominal Density

KMI	kg/m3	Lbs/ft3
10	10	0.625
12	12	0.750
16	16	1
18	18	1.125
20	20	1.250
24	24	1.5
32	32	2
36	36	2.25
48	48	3

NON TOXIC

KIMMCO Marine Insulation is not hazardous to health. (See KIMMCO MSDS)

Acoustic Performance

ASTM C423 - Mounting A as per ASTM E795

Product Type	Thickness	Absorption Coefficient of one-third octave frequencies Hz						
		125	250	500	1000	2000	4000	NRC
KMI 12	25	0.10	0.27	0.45	0.61	0.80	0.60	0.55
	50	0.20	0.52	0.71	0.88	0.85	0.80	0.75
	100	0.60	0.95	1.05	1.08	1.08	1.06	1.05
KMI 16	25	0.06	0.19	0.39	0.70	0.81	0.64	0.55
	50	0.20	0.51	0.72	0.89	0.88	0.88	0.80
	75	0.30	0.80	0.98	0.95	0.95	0.95	0.90
KMI 24	25	0.09	0.30	0.59	0.80	0.90	0.91	0.65
	50	0.22	0.57	0.97	1.00	0.98	1.00	0.90
	25	0.05	0.32	0.80	0.90	0.97	0.90	0.75
KMI 32	50	0.30	0.86	1.27	1.11	1.06	1.05	1.05
	25	0.03	0.28	0.78	0.88	0.94	0.87	0.70
	50	0.27	0.81	1.15	1.06	1.00	1.03	1.00
KMI 36	25	0.03	0.28	0.71	0.90	0.94	0.89	0.70
	50	0.16	0.78	1.09	1.12	1.03	1.05	1.00
	25	0.03	0.28	0.71	0.90	0.94	0.89	0.70
KMI 48	50	0.16	0.78	1.09	1.12	1.03	1.05	1.00

PERFORMANCE

Working Temperature – 230 °C

Permanence

Dimensionally stable under varying conditions of temperature and humidity, rot proof, odourless, non-hygroscopic and will not sustain vermin or fungus. Longer life due to no sag and settling.

CONFORMITY TO STANDARDS

KIMMCO Marine Insulation comply with the following standards:

American Standards

ASTM C167, 168, 177, 423, 518, 653, 665 § 13.8 & 13.9, 686, 991, 1045, 1101/1101M, 1104/1104M, 1136 (types 1&2), 1335; E 84, 96, 136, 336, 795

UL723

F.S. HH-B-100B (Type 1), HH-I-521F, HH-I-558B

NFPA 255

NAIMA Standards

ASHARE 90.1 requirements

British Standards

BS 476 (parts 4, 6 & 7), 874, 2972, 3533, 6676 (part 1)

German Standards

DIN 18165, 52612

ISO

354, 8301, 8302, 9229, 9291

Fire Safety

Base fibre is non-combustible when tested in accordance with BS 476 (Part 4), ASTM E84, 136.

Flame spread : Not over 25

Smoke developed : Not over 50

Moisture Absorption

Less than 1% by volume when tested in accordance with BS 2972 or 6676, ASTM C1104. KIMMCO Marine Insulation do not absorb moisture from the ambient air nor water by capillary attraction. Only water under pressure can enter the insulation products, but that will quickly dry out owing to the material's open cell structure.

Thermal Conductivity

Thermal conductivity according to BS 874, ASTM C177, 518; ISO 8301, 8302 or DIN 52612 are described in tables below:

Mean Temperature	Thermal Conductivity in W/m.K for the following densities in kg/m ³								
°C	10	12	16	18	20	24	32	36	48
0	0.038	0.036	0.034	0.033	0.032	0.031	0.030	0.029	0.029
10	0.040	0.038	0.036	0.035	0.034	0.032	0.031	0.030	0.030
25	0.044	0.041	0.039	0.038	0.036	0.035	0.033	0.032	0.031
50	0.055	0.048	0.044	0.043	0.041	0.039	0.037	0.036	0.035
75	0.064	0.059	0.051	0.048	0.046	0.043	0.040	0.039	0.037
100	0.074	0.065	0.057	0.053	0.051	0.047	0.044	0.043	0.041

Thickness (mm)	Thermal Resistance (m ² .KW) At 25°C Mean Temp								
	10	12	16	18	20	24	32	36	48
25	0.568	0.610	0.641	0.658	0.694	0.714	0.758	0.781	0.806
40	0.909	0.976	1.026	1.053	1.111	1.143	1.212	1.250	1.290
50	1.136	1.220	1.282	1.316	1.389	1.429	1.515	1.563	1.613
65	1.477	1.585	1.667	1.711	1.806	1.859	1.970	2.031	2.097
75	1.705	1.829	1.923	1.974	2.083	2.143	2.273	2.344	2.419
100	2.273	2.439	2.564	2.632	2.778	2.857	3.030	3.125	3.226
125	2.841	3.049	3.205	3.289	3.472	3.571	3.788	3.906	4.032
150	3.409	3.659	3.846	3.947	4.167	4.286	4.545	4.688	4.839

Mean Temperature	Thermal Conductivity in BTU.in/ft ² .h °F for the following densities in Lbs/ft ³								
°F	0.625	0.750	1	1.125	1.250	1.500	2	2.250	3
32	0.26	0.25	0.23	0.23	0.22	0.21	0.20	0.20	0.20
50	0.28	0.27	0.25	0.24	0.23	0.22	0.22	0.21	0.21
77	0.31	0.29	0.27	0.26	0.25	0.24	0.23	0.22	0.22
122	0.38	0.34	0.31	0.30	0.28	0.27	0.25	0.25	0.24
167	0.45	0.41	0.35	0.34	0.32	0.30	0.27	0.27	0.26
122	0.51	0.45	0.40	0.37	0.36	0.33	0.30	0.30	0.29

Thickness (inch)	Thermal Resistance (ft ² .h/Btu) at 77 °F Mean Temp.								
	10	12	16	18	20	24	32	36	48
1	3.226	3.448	3.704	3.846	4.000	4.167	4.371	4.507	4.653
1.5	4.839	5.172	5.556	5.769	6.000	6.250	6.556	6.761	6.979
2	6.452	6.897	7.407	7.692	8.000	8.333	8.742	9.015	9.306
3	9.677	10.345	11.111	11.538	12.000	12.500	13.113	13.522	13.958
4	12.903	13.793	14.815	15.385	16.000	16.667	17.483	18.030	18.611
5	16.129	17.241	18.519	19.231	20.000	20.833	21.854	22.537	23.264
6	19.355	20.690	22.222	23.077	24.000	25.000	26.225	27.045	27.917

These are typical values subject to normal manufacturing and testing

CERTIFICATION



CERTIFICATE NUMBER
11-DU2004117-X

PLANT LOCATION
Kuwait

PORT OFFICE
Dubai

CERTIFICATE OF MANUFACTURING ASSESSMENT

This is to certify that a representative of ABS did, at the request of
Kuwait Insulating Material Manufacturing Company
attend its facilities on the date and location stated, in order to carry out a survey of the facilities and associated quality procedures. The facility is considered capable of manufacturing a product which meets the designated standards, subject to annual facility surveys by a representative of ABS and renewal of this Certificate after five (5) years.

PRODUCT DESCRIPTION Non Combustible Material: Fiberglass Insulation

ISSUE DATE 27 June 2014 EXPIRATION DATE 26 June 2016

SURVEYOR'S SIGNATURE 

FIRST ANNUAL ENDORSEMENT  18 July 2015

SECOND ANNUAL ENDORSEMENT

THIRD ANNUAL ENDORSEMENT

FOURTH ANNUAL ENDORSEMENT

NOTE: This certificate evidences compliance with one or more of the Rules, Codes, standards or other criteria of ABS or a statutory, industrial or manufacturer's standard. It is issued solely for the use of ABS, its customers, its clients or other authorized entities. Any significant changes to the aforementioned manufacturing process without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3.1.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).



Certificate number: 14607/00 EC
File number: ACI 1500/450/001
Annex A1 Item number: A.13.13
This certificate is not valid when presented without the full attached schedule composed of 7 sections
www.veristar.com

MARINE DIVISION
Notified Body 0062 - MARINE EQUIPMENT DIRECTIVE 96/98/EC

EC TYPE EXAMINATION CERTIFICATE

as per Module B of European Union Council Directive 96/98/EC on marine equipment
as amended by Commission Directive 2009/67/EC

This certificate is issued to
Kuwait Insulating Material Manufacturing Co. (KIMMCO)
KUWAIT - KUWAIT

for the type of product
NON-COMBUSTIBLE MATERIALS
Glass wool, density from 12 to 64 kg/m³

Requirements:
SOLAS 74 convention as amended, Regulations II-2/3, X/3
IMO Resolution MSC.97(73) - (2000 HSC Code) 7
IMO Res. MSC.81(67) FTP Code
IMO MSC/Circ.1120.

This certificate is issued under the French Maritime Authority to attest that BUREAU VERITAS did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Council Directive 96/98/EC of 20 December 1996 as amended.

This certificate will expire on: **23 Mar 2015**

For BUREAU VERITAS Notified Body 0062,
At BV DUBAI, on 23 Mar 2010,
Emmanuel Duron




This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (whenever applicable) to the products corresponding to this type. To this end, the production control phase module (D, E or F) of Annex B of the Directive is to be completed with and controlled by a written inspection agreement with a notified body.
This certificate remains valid until the date stated above, unless cancelled or modified, provided the conditions indicated in the subsequent paragraphs are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified requirements of standards be amended during the validity of this certificate, the product(s) herein to be re-approved prior to fitting being placed on board vessels to which the amended requirements or standards apply. BUREAU VERITAS is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 143 Chapter 152. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division available on the internet site www.veristar.com. Any person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

BV Mod. Aci E 536 May 2009 This certificate consists of 2 page(s)

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Commitment to Quality

Properties of KIMMCO Glasswool Products

- Excellent thermal performance
- Superior acoustic performance
- Excellent fire safety
- Environmentally friendly: made from abundantly available, non-strategic materials like sand and up to 80% recycled glass.
- Suitable for a wide variety of applications (flexible, semi-rigid, rigid and extra-rigid)
- Address a variety of performance requirements (wide range of facing materials)
- Easy to cut and install, minimum wastage on site
- Comparatively light weight
- Dimensionally stable
- No sagging or settling
- Complies with international standards

Our Commitment to Quality

Our Glasswool products are manufactured under license of Saint-Gobain ISOVER, a leading insulation provider headquartered in France.

Further, we have a strong commitment to quality, as recognized by our certification by international bodies such as ISO.

Our Commitment to the Environment

KIMMCO was selected as the sole insulation supplier and official collaborator with MASDAR city, the world's first zero-carbon, zero-waste city, in Abu Dhabi. We have a strong commitment to the environment, health and safety of our people, and surrounding communities, and actively collaborate with local and international environmental agencies.

Further, KIMMCO Glasswool products help developers achieve green building rating certifications such as LEED, Estidama and QSAS.

Further, we are members of the following industry associations:

- Emirates Green Building Council (EGBC)
- Qatar Green Building Council (QGBC)
- MASDAR (The Future Build)
- Middle East Minerwool Insulation Manufacturers Association (MEMIMA)

Our Product Listing & Certification

- CE
- UL
- BV
- ABS
- DCL (Dubai Central Laboratory)



KIMMCO

means insulation!

Great Buildings Use Our Insulation Solutions



Enhanced Comfort through Thermal & Acoustic Insulation. Excellent Fire Protection.
Lower Energy Consumption. Environmentally Friendly.

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