

MM **KEMBLA**
Insulation

TECHNICAL GUIDE

**FIRE RETARDANT
NITRILE RUBBER
THERMAL
INSULATION**



**MM KEMBLA INSULATION
YOUR COMPLETE INSULATION
SOLUTION BACKED BY
MM KEMBLA'S QUALITY,
RELIABILITY AND SERVICE**

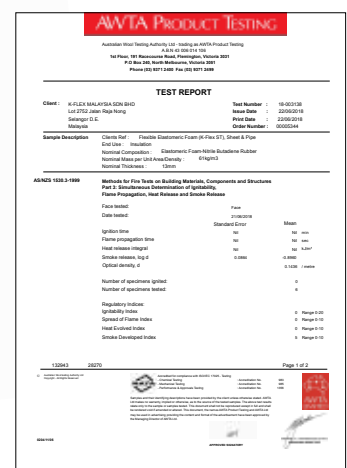
MM Kembla has been providing our customers with the highest quality and most reliable products and service for 100 years and is pleased to announce that we have partnered with global insulation leader L'Isolante K-Flex to bring you our new range of flexible elastomeric thermal insulation.

MM Kembla Insulation is a fire retardant, multi-purpose flexible elastomeric thermal insulation with a built in vapour barrier and a closed cell structure. This makes MM Kembla Insulation highly resistant to water vapour transmission and enables the product to maintain a high level of energy conservation efficiency.

MM Kembla Insulation is dust, fibre free and is HCFC-CFC free with an Ozone Depletion Potential (ODP) of zero. The impressive technical properties and supporting certifications and accreditations position MM Kembla Insulation as an ideal solution for any commercial, industrial, domestic, and marine and offshore applications. We offer a full comprehensive range that ensures MM Kembla Insulation is your one stop insulation shop for all of your needs.

**WHY USE MM KEMBLA INSULATION:
THE KEMBLA DIFFERENCE**

- ISO 9001:2000 Registered with over a thousand additional domestic and international certificates
- A wide range of tube and sheet with self adhesive and aluminium foil available
- Light weight and flexible for easy and speedy installation with low maintenance resulting in time and cost savings
- CFC and HCFC free with ozone depletion potential of zero
- Non-corrosive, smoke and fire retardant material
- Low thermal conductivity and high μ factor for effective control of condensation and insulating against heat loss and heat gain
- FM Approved
- Unrivalled Distribution Footprint
 - National Network of Distribution warehouses that reach every major state and territory
- MM Kembla's National Sales Force
 - providing on the ground support
 - National customer Service Centre
- Backed by MM Kembla's reputation for high quality products, service and customer care for over 100 years.



TECHNICAL SPECIFICATIONS

MM Kembla Insulation conforms to the requirements of the Building Code of Australia (Vol) 1, of the National Construction Code (NCC) 2015. MM Kembla Insulation is a closed cell extruded nitrile based rubber that exhibits better thermal conductivity as the air inside the closed cells has lower mobility than that produced in open Cells.

Vapour Diffusion into the insulation is much lower allowing the thermal conductivity to be guaranteed longer. MM Kembla Insulation is FM Approved assuring customers that our product has been objectively tested and conforms to the highest national and international standards.

TECHNICAL SPECIFICATION FOR MM KEMBLA INSULATION ST		
Construction	Closed Cell	
Density	45-70kg/m ³	
Temperature Range	-200 C to +116 C	
Thermal Conductivity	$\lambda=0.034W/(m.k) @ +20^{\circ} C$ $\lambda=0.032W/(m.k) @ 0^{\circ} C$ $\lambda=0.028W/(m.k) @ +20^{\circ} C$	AS4859.1 EN12667 DIN 52612
Water Vapour Diffusion Resistance Factor	$\mu \geq 10,000$	EN12086 DIN52612
Fire Performance	Class 1 – Complies with the fire hazard requirements of the Building Code of Australia	AS1530.3
Reaction to Fire	Self Extinguishing	
Environmental	Zero Ozone Depleting Potential (ODP), Low VOC	
Fungal / Mold Resistance	Resistant	ASTM G21 Anti Microbial Greenguard Approved
Manufacturer	K-Flex	

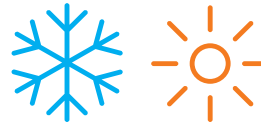
CERTIFICATION AND TESTING

MM Kembla Insulation has been independently tested by NATA accredited laboratories. Our insulation is compliant to the Australian Building Code Boards (ABCB) National Construction Code (NCC) 2015 edition. MM Kembla Insulation also carries a number of international globally recognised certifications.



MM KEMBLA INSULATION IS A CLOSED CELL INSULATION WITH MANY ADVANTAGES OVER THE TRADITIONAL OPEN CELL AND PRODUCTS MADE OF WOOL OR FIBREGLASS:

- Closed Cell Insulation has a better thermal conductivity, because the air inside of the closed cells has a lower mobility than that produced in open cells.
- Vapour diffusion into the MM Kembla Insulation is much lower, thus the thermal conductivity will be guaranteed for longer.
- The closed cell promotes a natural inhibition of bacterial growth as bacteria cannot spread within the structure.



VERY LOW THERMAL CONDUCTIVITY (λ FACTOR)

Thermal Conductivity is a measurement of the ability of a material to transmit heat. MM Kembla Insulation ST thermal conductivity is $\lambda = 0.032W/(m.K)$ @ $0^{\circ}C$. The thermal coefficient is the most important factor in the calculation as it focuses on energy saving. The lower the figure the better the thermal insulation.



HIGH WATER VAPOUR DIFFUSION RESISTANCE (μ factor)

MM Kembla Insulation ST closed cell elastomeric insulation has a high water vapour diffusion resistance factor μ , to minimise water vapour penetration, ensuring excellent long term performance. The higher the resistance to the penetrations of water vapour (μ), the greater the consistency of performance. This is significant when insulating cold items where insulation thicknesses are chosen to achieve a surface temperature above the ambient dewpoint.



LOW FLAME SPREAD

When Fire Tested MM Kembla Insulation does not generate flaming droplets and has a low fire propagation index. It is guaranteed to self extinguish in case of a fire and complies with the fire hazard requirements of the Building Code of Australia.

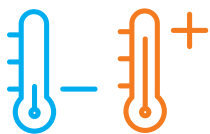


NON-TOXIC PRODUCTS

Many insulation materials are porous or fibrous. In these types of materials the presence of moisture and organic matter allow the growth of bacteria, mould, and fungi. MM Kembla Insulation is resistant to this and therefore helps contribute to the quality of the air that we breathe. We do our best to ensure that our products do not emit VOC's (volatile organic compounds) and have Zero ODP (Ozone Depletion Potential). Elastomeric Insulation such as MM Kembla Insulation is not made of fibrous material and does not release harmful particles into the air. Therefore our product is ideal for any application in public places such as schools and hospitals.

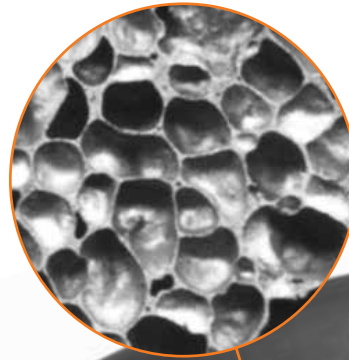
FLEXIBILITY AND EASE OF USE

The ease of installation of MM Kembla Insulation is one key feature that sets our materials apart from other products on the market. Due to its flexibility and elasticity, MM Kembla Insulation is ideal for a variety of applications. Professionals will appreciate its extreme cleanliness as it does not leave traces and residues behind during installation that can help achieve savings in installation time.



TEMPERATURE RANGE

MM Kembla Insulation is suitable for applications ranging from -200° C to +116° C. Our strict quality and safety expectations ensure that our material is compatible with applications with the strictest of specifications.



CLOSED CELL INSULATION



MM KEMBLA DIFFERENCE

Established in 1916, we have been providing our customers with the highest quality and most reliable products and services for 100 years. MM Kembla provides you with the security of knowing you are taking no chances.

MM KEMBLA INSULATION ST FIRE RETARDANT - 9MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K40500	6	1/4	9mm	158
K40502	10	3/8	9mm	110
K40504	13	1/2	9mm	100
K40506	15	5/8	9mm	94
K40508	20	3/4	9mm	68
K40510	22	7/8	9mm	64
K40512	25	1	9mm	54
K40514	28	1 1/8	9mm	49
K40516	32	1 1/4	9mm	42
K40518	35	1 3/8	9mm	38
K40520	40	1 1/2	9mm	34
K40522	42	1 5/8	9mm	30
K40526	50	2	9mm	24
K40528	54	2 1/8	9mm	23
K40530	60	2 3/8	9mm	23
K40532	67	2 5/8	9mm	23

MM KEMBLA INSULATION ST FIRE RETARDANT - 13MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K40546	6	1/4	13mm	100
K40548	10	3/8	13mm	76
K40550	13	1/2	13mm	64
K40552	15	5/8	13mm	56
K40554	20	3/4	13mm	50
K40556	22	7/8	13mm	49
K40558	25	1	13mm	40
K40560	28	1 1/8	13mm	36
K40562	32	1 1/4	13mm	30
K40564	35	1 3/8	13mm	29
K40566	40	1 1/2	13mm	25
K40568	42	1 5/8	13mm	25
K40572	50	2	13mm	20
K40574	54	2 1/8	13mm	20
K40576	60	2 3/8	13mm	16
K40578	67	2 5/8	13mm	15
K40582	76	3	13mm	15



MM KEMBLA INSULATION ST FIRE RETARDANT - 19MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K40592	6	1/4	19mm	50
K40594	10	3/8	19mm	40
K40596	13	1/2	19mm	36
K40598	15	5/8	19mm	36
K40600	20	3/4	19mm	30
K40602	22	7/8	19mm	30
K40604	25	1	19mm	25
K40606	28	1 1/8	19mm	24
K40608	32	1 1/4	19mm	20
K40610	35	1 3/8	19mm	20
K40612	40	1 1/2	19mm	18
K40614	42	1 5/8	19mm	16
K40618	50	2	19mm	12
K40620	54	2 1/8	19mm	12
K40622	60	2 3/8	19mm	11
K40624	67	2 5/8	19mm	11
K40628	76	2 3/8	19mm	9
K40630	79	2 5/8	19mm	9
K40632	89	2	19mm	8
K40634	100	4	19mm	7

MM KEMBLA INSULATION ST FIRE RETARDANT - 25MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K40638	6*	1/4	25mm	30
K40640	10	3/8	25mm	26
K40642	13	1/2	25mm	25
K40644	15	5/8	25mm	25
K40646	20	3/4	25mm	20
K40648	22	7/8	25mm	19
K40650	25	1	25mm	16
K40652	28	1 1/8	25mm	16
K40654	32	1 1/4	25mm	16
K40656	35	1 3/8	25mm	15
K40658	40	1 1/2	25mm	11
K40660	42	1 5/8	25mm	12
K40664	50	2	25mm	10
K40666	54	2.125	25mm	9
K40668	60	2 3/8	25mm	9
K40670	67	2 5/8	25mm	8
K40674	76	3	25mm	6
K40678	89	3.5	25mm	6

* Available on request

MM KEMBLA INSULATION ST FIRE RETARDANT - 32MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K40686	10*	3/8	32mm	20
K40688	13	1/2	32mm	18
K40690	15	5/8	32mm	18
K40692	20	3/4	32mm	16
K40694	22	7/8	32mm	12
K40696	25	1	32mm	12
K40698	28	1 1/8	32mm	12
K40700	32	1 1/4	32mm	11
K40702	35	1 3/8	32mm	10
K40704	40	1 1/2	32mm	8
K40706	42	1 5/8	32mm	9
K40712*	54	2.125	32mm	7
K40714*	60	2 3/8	32mm	6
K40716*	67	2 5/8	32mm	4
K40720*	76	3	32mm	4
K40724*	89	3 1/2	32mm	4
K40728*	114	4 1/2	32mm	3

* Available on request

MM KEMBLA INSULATION ST FIRE RETARDANT - 38MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K40736	15	5/8	38mm	11
K40738	20	3/4	38mm	11
K40740	22	7/8	38mm	9
K40742	25	1	38mm	8
K40744	28	1 1/8	38mm	8
K40746*	32	1 1/4	38mm	8
K40748	35	1 3/8	38mm	8
K40752*	42	1 5/8	38mm	6
K40758*	54	2.125	38mm	5
K40760*	60	2 3/8	38mm	4
K40762*	67	2 5/8	38mm	4
K40766*	76	3	38mm	4
K40770*	89	3 1/2	38mm	4
K40774*	114	4 1/2	38mm	3

* Available on request

MM KEMBLA INSULATION ST FIRE RETARDANT - 50MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K40786	22	7/8	50mm	6
K40788	25	1	50mm	5
K40790	28	1 1/8	50mm	5
K40794	35	1 3/8	50mm	4
K40798	42	1 5/8	50mm	4
K40800	48	1 7/8	50mm	4
K40804	54	2 1/8	50mm	4
K40806	60	1 3/8	50mm	4
K40812	76	3	50mm	3
K40816	89	3 1/2	50mm	3
K40820	114	4 1/2	50mm	2

* Available on request

PRODUCT RANGE



MM KEMBLA INSULATION CONTINUOUS COIL - FIRE RETARDANT - 9MM WT

Product Code	Insulation ID		Wall Thickness	Carton Mtrs
	mm	inch		
K45940	6	1/4	9mm	80
K45941	10	3/8	9mm	60
K45942	13	1/2	9mm	50
K45943	15	5/8	9mm	40
K45944	20	3/4	9mm	40
K45945	22	7/8	9mm	30
K45946	28	1 1/8	9mm	20

MM KEMBLA INSULATION CONTINUOUS COIL - FIRE RETARDANT - 13MM WT

Product Code	Insulation ID		Wall Thickness	Carton Mtrs
	mm	inch		
K45950	10	3/8	13mm	40
K45951	13	1/2	13mm	40
K45952	15	5/8	13mm	30
K45953	20	3/4	13mm	30
K45954	28	1 1/8	13mm	15



MM KEMBLA INSULATION PRE-CUT INSULATION SHEETS - FIRE RETARDANT

Product Code	Insulation Thickness		Width x Length	Carton Sheets
	mm	inch		
K45961	10	3/8	1m x 1.22m	26
K45962	13	1/2	1m x 1.22m	20
K45963	20	3/4	1m x 1.22m	14
K45964	25	1	1m x 1.22m	10
K45965	32	1 1/4	1m x 1.22m	8
K45966	40	1 1/2	1m x 1.22m	7
K45967	50	2	1m x 1.22m	4

MM KEMBLA INSULATION SELF SEAL FIRE RETARDANT - 9MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K41056	13	1/2	9mm	90
K41058	15	5/8	9mm	84
K41060	20	3/4	9mm	68
K41062	22	7/8	9mm	64
K41064	25	1	9mm	54
K41066	28	1 1/8	9mm	49
K41068	32	1 1/4	9mm	38
K41070	35	1 3/8	9mm	38



MM KEMBLA INSULATION SELF SEAL FIRE RETARDANT - 13MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K41102	13	1/2	13mm	64
K41104	15	5/8	13mm	56
K41106	20	3/4	13mm	52
K41108	22	7/8	13mm	49
K41110	25	1	13mm	40
K41112	28	1 1/8	13mm	39
K41114	32	1.25	13mm	29
K41116	35	1.375	13mm	29
K41120	42	1 5/8	13mm	24

MM KEMBLA INSULATION HT FIRE RETARDANT - 13MM WT				
Product Code	Insulation ID		Wall Thickness	Carton Quantity
	mm	inch		
K40872	13	1/2	13mm	72
K40876	20	3/4	13mm	60



Other sizes available on request.

MM Kembla – HT is constructed of EPDM (Ethylene Propylene Diene Monomer Synthetic Rubber). Suitable for applications with service temperatures from -50C and up to 150C"

ACCESSORIES



ADHESIVE		
Product Code	Product Description	Carton Quantity
K45970	MM Kembla Adhesive - 1 litre/w brush	6
K45971	MM Kemba Adhesive - 500 ml/w brush	8



INSULATION FOAM TAPE		
Product Code	Product Description	Carton Quantity
K45972	Insulated Tape - 3mm x 48mm x 9.14m	24



ALUMINIUM TAPE		
Product Code	Product Description	Carton Quantity
K45973	Aluminium Foil Tape - 48mm x 45m	24
K45974	Aluminium Foil Tape - 60mm x 45m	20
K45975	Aluminium Foil Tape - 72mm x 45m	16
K45980	Reinforced Aluminium Tape - 48mm x 50m	24
K45981	Reinforced Aluminium Tape - 72mm x 45m	16

R-VALUES

MM KEMBLA INSULATION ST - R-VALUES								
Nominal Pipe Size		Insulation Thickness (mm)						
inch	mm	9mm	13mm	19mm	25mm	32mm	38mm	50mm
1/4	6	0.50	0.81	1.33	1.90	2.39	3.18	4.23
3/8	10	0.44	0.70	1.14	1.63	2.06	2.75	3.66
1/2	12	0.41	0.65	1.06	1.51	1.90	2.54	3.39
5/8	15	0.39	0.61	1.00	1.42	1.79	2.39	3.19
3/4	20	0.37	0.59	0.95	1.35	1.70	2.27	3.03
7/8	22	0.36	0.57	0.91	1.29	1.63	2.17	2.90
1	25	0.35	0.55	0.88	1.25	1.57	2.09	2.79
1 1/8	28	0.35	0.54	0.86	1.21	1.52	2.02	2.70
1 1/4	32	0.34	0.52	0.83	1.17	1.46	1.95	2.60
1 3/8	35	0.33	0.51	0.81	1.14	1.43	1.90	2.53
1 1/2	40	0.32	0.50	0.78	1.09	1.36	1.81	2.40
1 5/8	42	0.32	0.50	0.78	1.09	1.36	1.81	2.40
2	50	0.32	0.48	0.76	1.06	1.32	1.74	2.31
2 1/8	54	0.31	0.48	0.74	1.03	1.28	1.69	2.24
2 3/8	60	0.31	0.47	0.73	1.01	1.25	1.65	2.18
2 5/8	67	0.31	0.46	0.71	0.99	1.22	1.60	2.12
3	76	0.30	0.45	0.70	0.97	1.19	1.56	2.05
3 1/8	80	0.30	0.45	0.70	0.96	1.18	1.54	2.03
3 1/2	89	0.30	0.45	0.68	0.94	1.15	1.51	1.98
4	101	0.30	0.44	0.68	0.94	1.15	1.51	1.98
4 1/2	114	0.30	0.44	0.66	0.90	1.10	1.43	1.87

R-value or Thermal resistance is a measure of the ability of a material to retard heat flow. The higher the R-value the higher the insulating value. The Building Code of Australia and several Australian standards specify R-values to help determine what insulation material and thickness should be used. The BCA lists the requested R-values for pipe insulation in Specification J5.

For further information please contact your MM Kembla representative, customer service or visit our website.



MM Kembla Australia

Gloucester Boulevard, Port Kembla NSW 2505 Australia
 PO Box 21, Port Kembla NSW 2505 Australia
 T: 1800 804 631 F: 1800 817 846 E: sales@kembla.com.au
 www.kembla.com.au

MM Kembla ABN 13 003 762 641

MM, Kembla and MM Kembla are trademarks of Metal Manufactures Ltd

Technical Bulletin No: D68/21

MM Kembla New Zealand

263 Ti Rakau Drive, East Tamaki, Auckland 2013 New Zealand
 PO Box 51-525, Pakuranga, Auckland 2140 New Zealand
 T: +64 9 274 0111 F: +64 9 274 0347 E: sales@mmbrands.co.nz
 www.mmbrands.co.nz



VAPOUR RESISTANT.
FIRE RETARDANT.
ENERGY SAVING.

CLOSED CELL
THERMAL INSULATION
FROM MM KEMBLA

BY  **K-FLEX**

 **KEMBLA**
Insulation

www.kembla.com.au