

# **KEMBLA** **Insulation**

**TECHNICAL GUIDE**

**NITRILE RUBBER  
INSULATION**



BY  **K-FLEX**

## 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 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 & 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 rated material
- Low thermal conductivity and high m<sub>p</sub> 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



## TECHNICAL SPECIFICATIONS

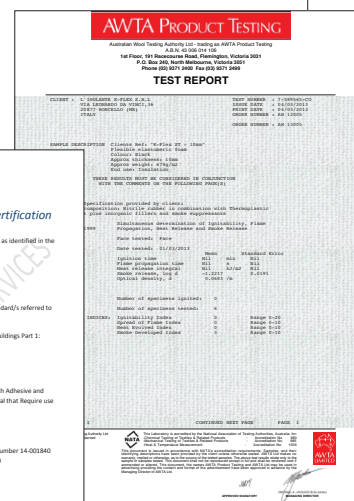
MM Kembla Insulation conforms to the requirements of the Building Code of Australia (Vol) 1, of the National Construction Code (NCC) 2015. MM Kembla Insulation is a closed cell extruded nitrile based rubber that exhibits better thermal conductivity as the air inside the closed cells has lower mobility 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 <sup>3</sup>	
Temperature Range	-200 C to +116 C	
Thermal Conductivity	$\lambda=0.034W/(m.k)$ @ +20° C $\lambda=0.033W/(m.k)$ @ 0° C $\lambda=0.028W/(m.k)$ @ +20° 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

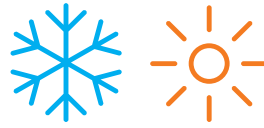
MM Kembla Insulation has been independently tested by NATA accredited laboratories. Our insulation is compliant to the Australian Building Code Boards (ABCB) National Construction Code (NCC) 2015 edition. MM Kembla Insulation also carries a number of international globally recognised certifications.





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 ( $\lambda$ FACTOR)

Thermal Conductivity is a measurement of the ability of a material to transmit heat. MM Kembla Insulation ST thermal conductivity is  $\lambda = 0.033 \text{ W/(m}\cdot\text{K)}$  @  $0^\circ \text{ C}$ . 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 ( $\mu$ factor)

MM Kembla Insulation ST closed cell elastomeric insulation has a high water vapour diffusion resistance factor  $\mu$ , to minimise water vapour penetration, ensuring excellent long term performance. The higher the resistance to the penetrations of water vapour ( $\mu$ ), 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.

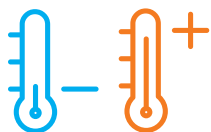


## NON-TOXIC PRODUCTS

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.

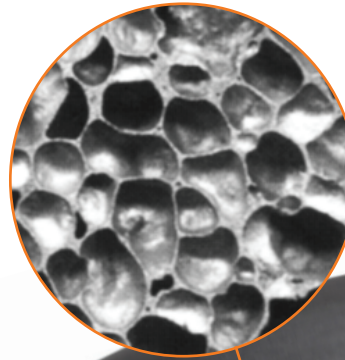
## FLEXIBILITY AND EASE OF USE

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

MM Kembla is celebrating its centenary this year. 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.

## PRODUCT RANGE

MM KEMBLA INSULATION ST								
Nominal Pipe Size		9mm WT	13mm WT	19mm WT	25mm WT	32mm WT	40mm WT	50mm WT
inch	mm	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn
1/4	6	144	80	50				
3/8	10	120	76	40	30	20	9	
1/2	12	90	64	36	25	20	9	
5/8	15	84	56	30	25	20	9	
3/4	20	68	52	30	20	16	9	
7/8	22	64	44	30	19	12	9	6
1	25	54	40	25	20	12	8	5
1 1/8	28	49	39	24	16	12	8	5
1 1/4	32	38	35	20	12	9	8	4
1 3/8	35	38	39	18	12	9	8	4
1 1/2	40	30	24	16	11	8	6	4
1 5/8	42	30	24	16	11	8	6	4
2	50	25	19	12	9	7	5	4
2 1/8	54	23	17	12	9	7	5	4
2 3/8	60	23	16	11	9	5	4	4
2 5/8	67	23	13	9	9	5	4	4
3	76	20	13	9	5	4	4	3
3 1/8	80	18	12	7	5	4	4	3
3 1/2	89	18	12	7	4	4	4	3
4	101	11	8	6	3	3	3	3
4 1/2	114	11	8	6	3	3	3	3

MM KEMBLA INSULATION - SOLAR				MM KEMBLA INSULATION - SELF SEAL			
Insulation ID		13mm WT		Insulation ID		13mm WT	
inch	mm	Pcs/Ctn		inch	mm	Pcs/Ctn	
1/2	12	56		1/2	12	56	
3/4	20	42		3/4	20	42	
1	25	32		1	25	32	
1 1/4	32	25					
1 1/2	40	20					

\* For any additional sizes and/or products please contact your local state sales manager or MM Kembla's head office.

## MM KEMBLA INSULATION ACCESSORIES



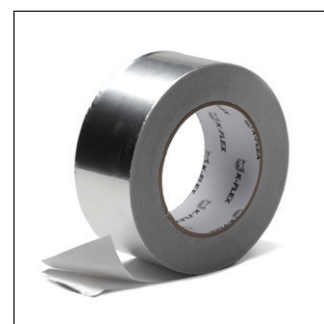
SELF ADHESIVE TAPES



PIPE SUPPORT



K996 GLUE



ALUMINIUM TAPE

## R-VALUES

MM KEMBLA INSULATION ST - R - Values								
Nominal Pipe Size		Insulation Thickness (mm)						
inch	mm	9mm	13mm	19mm	25mm	32mm	40mm	50mm
1/4	6	0.5	0.8	1.2	1.8	2.3	3.0	4.0
3/8	10	0.4	0.7	1.1	1.5	1.9	2.6	3.4
1/2	12	0.4	0.6	1.0	1.4	1.8	2.5	3.3
5/8	15	0.4	0.6	1.0	1.4	1.7	2.3	3.1
3/4	20	0.4	0.5	0.9	1.2	1.6	2.1	2.8
7/8	22	0.3	0.5	0.9	1.2	1.5	2.0	2.7
1	25	0.3	0.5	0.8	1.2	1.5	2.0	2.6
1 1/8	28	0.3	0.5	0.8	1.1	1.4	1.9	2.5
1 1/4	32	0.3	0.5	0.8	1.1	1.4	1.8	2.4
1 3/8	35	0.3	0.5	0.8	1.1	1.3	1.8	2.4
1 1/2	40	0.3	0.5	0.7	1.0	1.3	1.7	2.3
1 5/8	42	0.3	0.5	0.7	1.0	1.3	1.7	2.3
2	50	0.3	0.5	0.7	1.0	1.2	1.6	2.2
2 1/8	54	0.3	0.5	0.7	1.0	1.2	1.6	2.1
2 3/8	60	0.3	0.4	0.7	0.9	1.2	1.6	2.1
2 5/8	67	0.3	0.4	0.7	0.9	1.2	1.5	2.0
3	76	0.3	0.4	0.7	0.9	1.1	1.5	1.9
3 1/8	80	0.3	0.4	0.7	0.9	1.1	1.5	1.9
3 1/2	89	0.3	0.4	0.6	0.9	1.1	1.4	1.9
4	101	0.3	0.4	0.6	0.9	1.1	1.4	1.8
4 1/2	114	0.3	0.4	0.6	0.8	1.1	1.3	1.8

MM Kembla Insulation's R-value calculation is based on 0.33 W/mk for insulation thickness <25mm and 0.036 W/mk for insulation thickness >25mm

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 New Zealand

20B Trugood 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@kembla.co.nz  
www.kembla.co.nz

### MM Kembla ABN 13 003 762 641

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**VAPOUR RESISTANT.**  
**FIRE RETARDANT.**  
**ENERGY SAVING.**

**THE CLOSED CELL  
INSULATION SYSTEM  
FROM MM KEMBLA  
MANUFACTURED  
BY K-FLEX.**

 **KEMBLA**  
**Insulation**  
BY  **K-FLEX**