



# QUADZERO™ MVT

## flexible foil-faced vapor barrier

Quadzero MVT is a foil-faced, mass-loaded vinyl developed to meet moisture vapor transmission (MVT) resistance in liquefied natural gas (LNG) and cryogenic pipelines. It also serves as an acoustic barrier to assist in reducing noise.

As an acoustic solution, Quadzero MVT reduces the impact of unwanted sound, offering a 2-in-1 barrier product to combat not only noise but also vapor transmission.

Quadzero MVT surface is constructed with a durable grade of 12 µm polyester / 25 µm foil / 12 µm polyester (PAP) with a reinforcement layer to provide extra strength and ripstop properties. The PAP surface covering stops plasticizer migration and leaching of other substances. Resistant to UV and weathering, the PAP facing also provides a good surface for easy adhesion. Quadzero MVT is ideally used over mineral wool, cellular glass, polyurethane, polyisocyanurate, phenolic, styrene and rigid fiberglass.

Quadzero MVT can be installed in both cold and warm weather conditions, ranging from -40 °F to 248 °F. Designed for hot and cold LNG pipe applications to reduce noise and control vapour transmission whilst maintaining thermal performance and preventing corrosion under insulation (CUI).

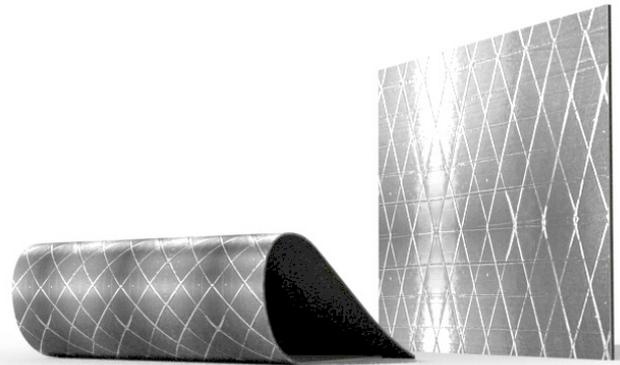
Quadzero MVT requires minimal effort to install and has been independently tested for noise and vapor transmission. Quadzero MVT can easily be adjusted to fit around pipe insulation systems. It is flexible, tear-resistant, and is available in various sizes and weights.

### HEALTH AND SAFETY, VOC & ODP STATEMENT

Quadzero MVT is non-toxic and safe to handle by methods prescribed in Safety datasheet. No Volatile Organic Compounds (VOC) are intentionally added to Quadzero MVT during its manufacture when evaluated according to definitions as applied under the Australia National Pollutant Inventory, The Council of the European Union, Council Directive 1999/13/EC or the USA EPA regulation 40 CFR 51.100(s). No Ozone depleting substances are used during the manufacture of Quadzero MVT.

### SPECIFICATIONS

Colour	Silver (foil facing), and black
Available	Standard roll size: 1.22 x 4.6 to 9.1 m (4 ft x 15 to 30 ft)
	Barrier weight: 2.5 kg/m <sup>2</sup> (0.5 lb/ft <sup>2</sup> ), 5 kg/m <sup>2</sup> (1 lb/ft <sup>2</sup> ) 7.5 kg/m <sup>2</sup> (1.5 lb/ft <sup>2</sup> ), 10 kg/m <sup>2</sup> (2 lb/ft <sup>2</sup> )
	Custom sizes available depending on MOQ



## applications

- Liquefied natural gas (LNG) and cryogenic pipes
- Ideally used over mineral wool, cellular glass, polyurethane, polyisocyanurate, phenolic, styrene and rigid fiberglass.
- Wrapped around other noisy pipes, valves and fan casings e.g. fluid or gas pulsation in chemical, petrochemical and waste water treatment plants
- Compressor jackets where acoustic and thermal treatment is required

## features

- Low vapor permeability - maintaining thermal performance of the insulation
- No plasticizer or leaching through the PAP surface covering
- Can be installed in cold and warm temperatures ranging from -40 °F to 248 °F without deterioration
- Simple to cut and install, providing flexibility around LNG pipes or other similar applications
- Resistant to weather and UV light
- Tear resistant with high tensile strength
- Available in various weights, widths, roll lengths and sheet sizes
- The foil facing makes it easy to bond onto other substrates using matching PAP tape





## PRODUCT SPECIFICATIONS

Barrier Weight	Thickness	Standard Roll Size	Standard Roll Weight	Operating temperature range
2.5 kg/m <sup>2</sup> (0.5 lb/ft <sup>2</sup> )	1.2 mm (0.05 in)	1.22 x 9.1 m (4 ft x 30 ft)	27 kg (60 lb)	Continuous: -40 to 100 °C (-40 to 212 °F) Intermittent: -40 to 120 °C (-40 to 248 °F)
5 kg/m <sup>2</sup> (1 lb/ft <sup>2</sup> )	2.5 mm (0.1 in)	1.22 x 9.1 m (4 ft x 30 ft)	54 kg (120 lb)	
7.5 kg/m <sup>2</sup> (1.5 lb/ft <sup>2</sup> )	3.7 mm (0.15 in)	1.22 x 6.1 m (4 ft x 20 ft)	54 kg (120 lb)	
10 kg/m <sup>2</sup> (2 lb/ft <sup>2</sup> )	4.9 mm (0.19 in)	1.22 x 4.6 m (4 ft x 15 ft)	54 kg (120 lb)	

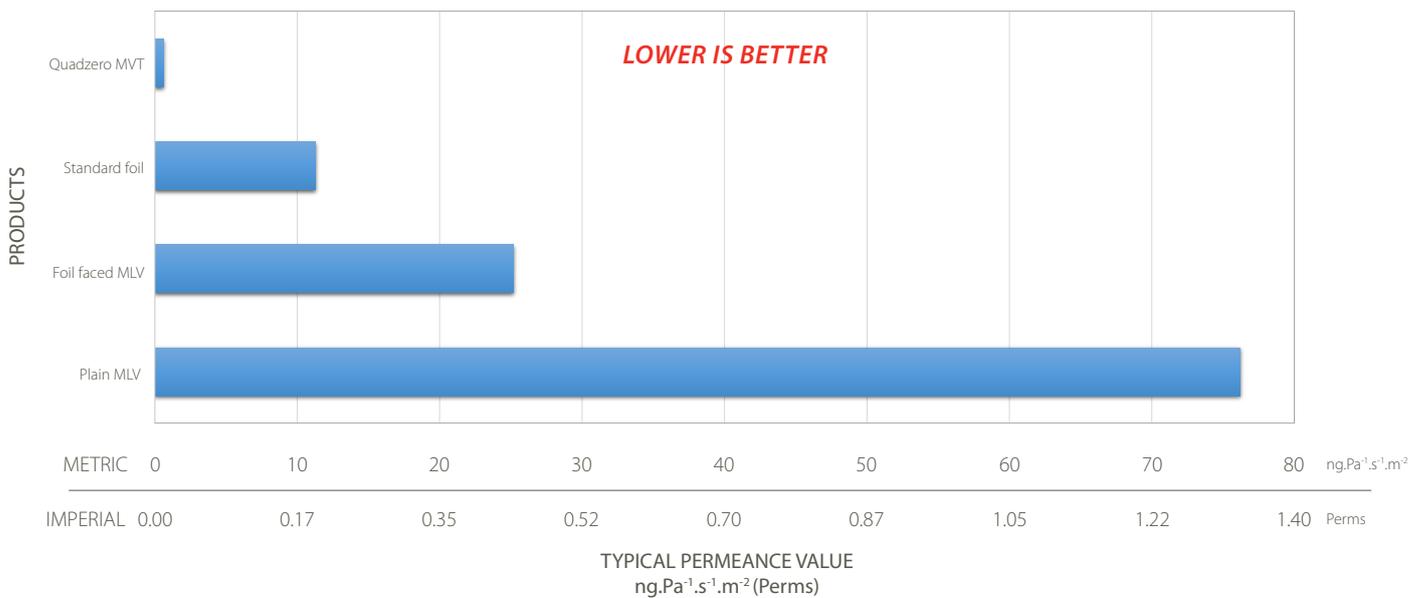
Tolerances: Length: -0/+50 mm (2 in), Width: -0/+5 mm (0.2 in), Thickness: ±0.5 mm (0.02 in), Weight: ±10%

Supplied untrimmed - means some surface coverings such as foils, film or fabric may overhang the ordered useable width

## MATERIAL PROPERTIES

Test method	Property	Report no.	Results
ASTM E 96	Water vapor transmission & permeance	103095355MID-001B	0.65 ng·Pa <sup>-1</sup> ·s <sup>-1</sup> ·m <sup>-2</sup> (0.011 Perms)
ASTM D638	Nominal tensile strength	26819JY	2.06 MPa
ASTM D638	Nominal Elongation		9.3%
ASTM D2240	Shore D hardness		14 Shore D
UL94 - HF/HBF	Flammability of plastic materials	27419BD2	Passes

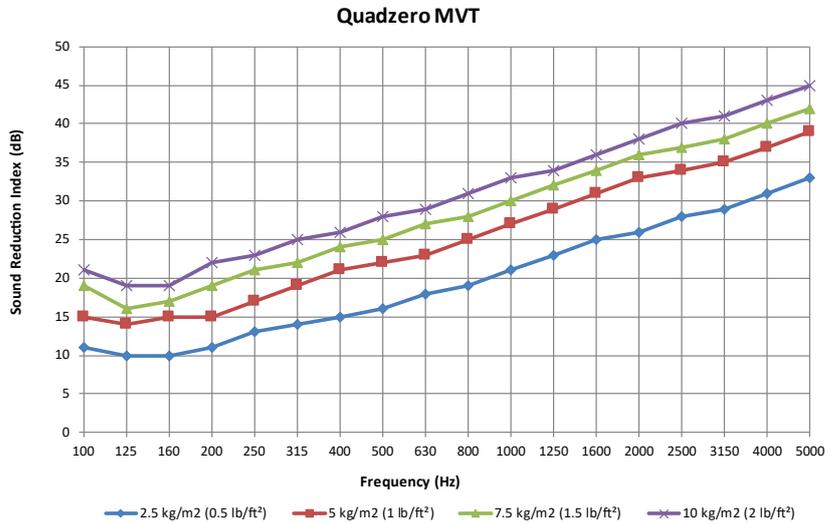
## COMPARISON WITH OTHER SOLUTIONS





## ACOUSTIC PERFORMANCE

Frequency (Hz)	2.5 kg/m <sup>2</sup> (0.5 lb/ft <sup>2</sup> )	5 kg/m <sup>2</sup> (1 lb/ft <sup>2</sup> )	7.5 kg/m <sup>2</sup> (1.5 lb/ft <sup>2</sup> )	10 kg/m <sup>2</sup> (2 lb/ft <sup>2</sup> )
100	11	15	19	21
125	10	14	16	19
160	10	15	17	19
200	11	15	19	22
250	13	17	21	23
315	14	19	22	25
400	15	21	24	26
500	16	22	25	28
630	18	23	27	29
800	19	25	28	31
1000	21	27	30	33
1250	23	29	32	34
1600	25	31	34	36
2000	26	33	36	38
2500	28	34	37	40
3150	29	35	38	41
4000	31	37	40	43
5000	33	39	42	45
<i>R<sub>w</sub></i>	21	26	30	32
STC	21	26	30	32



Tested to ASTM E90 at Riverbank Acoustical Laboratories, USA  
Report Numbers: TL18-641, TL18-642, TL18-643 & TL18-644

## ISO 15665 PIPE INSULATION TESTING

Barrier Weight	Test method	System Assembly	Report no.	Results
6 kg/m <sup>2</sup> (1.2 lb/ft <sup>2</sup> )	ISO 15665 (Group 2 Pipe Size)	Available on request	A 3041-1E-RA-002	ISO 15665: Class A2 & B2 NORSOK R-004: Class 6 & Class 7
6 kg/m <sup>2</sup> (1.2 lb/ft <sup>2</sup> ) & 10 kg/m <sup>2</sup> (2 lb/ft <sup>2</sup> )	ISO 15665 (Group 2 Pipe Size)	Available on request	A 3041-4E-RA-002	ISO 15665: Class B2 & C2 NORSOK R-004: Class 7 & Class 8

Testing was conducted using Wavebar®

For further information and contact details, please visit our website [pyroteknc.com](http://pyroteknc.com)

*Caveats: Specifications are subject to change without notice. The data in this document is typical of average values based on tests by independent laboratories or by the manufacturer and are indicative only. Materials must be tested under intended service conditions to determine their suitability for purpose. The conclusions drawn from acoustic test results are as interpreted by qualified independent testing authorities. Nothing here releases the purchaser/user from responsibility to determine the suitability of the product for their project needs. Always seek the opinion of your acoustic, mechanical and fire engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek is not responsible for differing outcomes from using their products. Pyrotek disclaims any liability for damages or consequential loss as a result of reliance solely on the information presented. No warranty is made that the use of this information or of the products, processes or equipment to which this Information Page refers will not infringe any third party's patents or rights. DISCLAIMER: This document is covered by Pyrotek standard Disclaimer, Warranty and © Copyright clauses. See [pyroteknc.com/disclaimer](http://pyroteknc.com/disclaimer).*

