



# 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.

Noise generated from pipelines has been subjected to regulations and restrictions. 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.

Pipeline operating and ambient temperatures can create perfect conditions for moisture buildup inside insulated equipment. The low permeability properties of Quadzero MVT blocks moisture entry into the insulation system, maintaining its 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. As a strong vapor and noise barrier layer solution, 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.

### VOC STATEMENT

Quadzero™ products contain no ozone-depleting substances and comply with European and Australian standards for Volatile Organic Compound emissions.

### SPECIFICATIONS

|           |   |
|-----------|---|
| Colour    | Silver (foil facing), and black   |
| Available | Standard roll size:<br>1.37 m x 5 m   |
|           | Barrier weight:<br>2 kg/m <sup>2</sup> , 4 kg/m <sup>2</sup> , 6 kg/m <sup>2</sup> , 8 kg/m <sup>2</sup> , 10 kg/m <sup>2</sup> |
|           | Custom sizes available depending on MOQ   |



## applications

- Liquefied natural gas (LNG) and cryogenic pipes
- 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
- 2-in-1 solution: vapor barrier and noise barrier
- 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 Tape ALR adhesive or equivalent





## PRODUCT SPECIFICATIONS

| Barrier weight                                | Standard thickness | Standard roll weight | Standard roll size                 | Operating temperature range                         |
|---|--------------------|----------------------|------------------------------------|---|
| 2 kg/m <sup>2</sup> (0.4 lb/ft <sup>2</sup> ) | 1.2 mm (0.05 in)   | 27 kg (60 lb)        | 1.37 m x 5 m<br>(4.5 ft x 16.4 ft) | -40 °C to 100 °C (-40 °F to 212 °F)<br>continuous   |
| 4 kg/m <sup>2</sup> (0.8 lb/ft <sup>2</sup> ) | 2.0 mm (0.08 in)   | 27 kg (60 lb)        |                                    |   |
| 6 kg/m <sup>2</sup> (1.2 lb/ft <sup>2</sup> ) | 3.0 mm (0.12 in)   | 41 kg (91 lb)        |                                    |   |
| 8 kg/m <sup>2</sup> (1.6 lb/ft <sup>2</sup> ) | 4.0 mm (0.16 in)   | 54 kg (119 lb)       |                                    | -40 °C to 120 °C (-40 °F to 248 °F)<br>intermittent |
| 10 kg/m <sup>2</sup> (2 lb/ft <sup>2</sup> )  | 4.9 mm (0.19 in)   | 68 kg (150 lb)       |                                    |   |

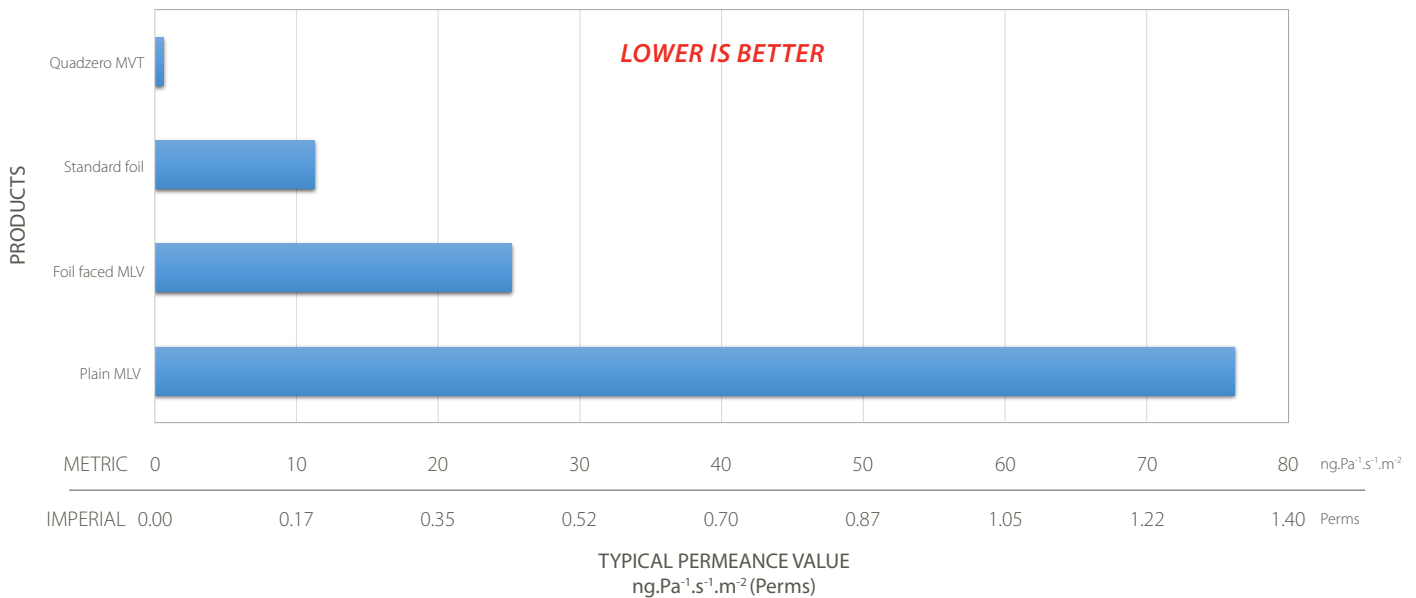
Tolerances: Length: ±1%, Width: -0/+5 mm, Thickness: ±0.5 mm, Weight: ±10%. Bulk rolls are available. Please contact your local Pyrotek office for more information.

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

## MATERIAL PROPERTIES

| Product           | Test method | Property                             | Report no.        | Results   |
|-------------------|-------------|--------------------------------------|-------------------|---|
| Quadzero MVT      | 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) |
| Quadzero MVT Foil | ASTM E 96   | Water vapor transmission & permeance | 103010480MID-001  | 0.73 ng. Pa <sup>-1</sup> . s <sup>-1</sup> . m <sup>-2</sup> (0.011 Perms) |

## COMPARISON WITH OTHER SOLUTIONS

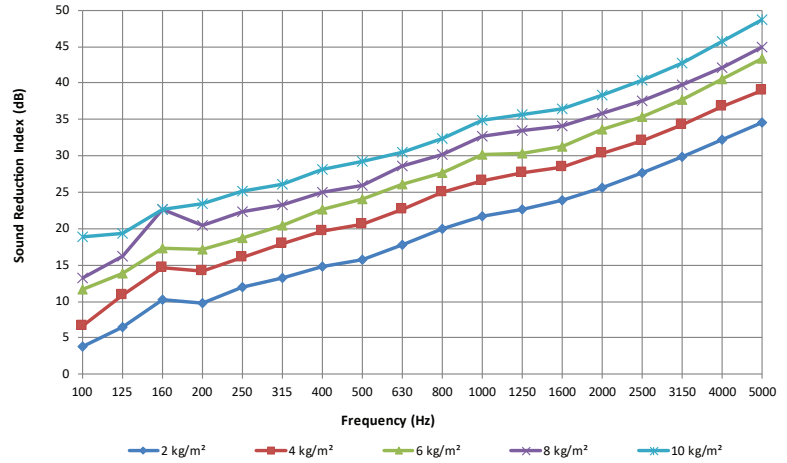




## ACOUSTIC PERFORMANCE

| Frequency (Hz) | 2 kg/m <sup>2</sup> | 4 kg/m <sup>2</sup> | 6 kg/m <sup>2</sup> | 8 kg/m <sup>2</sup> | 10 kg/m <sup>2</sup> |
|----------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| 100            | 3.8                 | 6.7                 | 11.6                | 13.3                | 18.9                 |
| 125            | 6.4                 | 10.8                | 13.8                | 16.2                | 19.3                 |
| 160            | 10.2                | 14.7                | 17.3                | 22.6                | 22.6                 |
| 200            | 9.8                 | 14.1                | 17.2                | 20.5                | 23.4                 |
| 250            | 12.0                | 16.0                | 18.7                | 22.3                | 25.2                 |
| 315            | 13.2                | 17.9                | 20.4                | 23.2                | 26.1                 |
| 400            | 14.8                | 19.7                | 22.7                | 25.0                | 28.1                 |
| 500            | 15.8                | 20.6                | 24.1                | 26.0                | 29.3                 |
| 630            | 17.8                | 22.6                | 26.1                | 28.6                | 30.5                 |
| 800            | 20.0                | 25.0                | 27.7                | 30.1                | 32.3                 |
| 1000           | 21.7                | 26.6                | 30.2                | 32.7                | 34.9                 |
| 1250           | 22.7                | 27.6                | 30.3                | 33.4                | 35.7                 |
| 1600           | 23.9                | 28.5                | 31.2                | 34.1                | 36.4                 |
| 2000           | 25.6                | 30.4                | 33.6                | 35.9                | 38.4                 |
| 2500           | 27.7                | 32.1                | 35.4                | 37.6                | 40.4                 |
| 3150           | 29.9                | 34.3                | 37.7                | 39.7                | 42.7                 |
| 4000           | 32.2                | 36.7                | 40.6                | 42.1                | 45.7                 |
| 5000           | 34.6                | 39.0                | 43.3                | 45.0                | 48.7                 |
| Rw             | 21                  | 25                  | 28                  | 31                  | 34                   |
| STC            | 21                  | 26                  | 28                  | 31                  | 34                   |

## Quadzero MVT



Tested to ISO 15186-1:2003 & 10140-4:2010 at University of Canterbury, New Zealand  
 Report Numbers: 261c, 262c, 263c, 264c & 265c  
 Results for Quadzero

## 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).*

