
Ethafoam[®] M-Series

Defence Packing Solutions

Polyethylene Foams Created
to Protect and Serve



THE ONE FOAM THAT ANSWERS



When the military first created a specification for polyethylene foam components and materials, only one product could meet their expectations: Ethafoam® foam. Decades later, Ethafoam® foams continue to meet the highest standards of excellence, without compromising on safety or quality.

SPECIFICATIONS MET AND EXCEEDED

Ethafoam® foams are designed to meet the stringent AA-59136 CID specification (previously PPP-1752D specification) and the less than 10% LEL (Lower Explosion Limit) requirement. Additionally, Ethafoam® M-Series foams are specified in the Container Design and Retrieval Systems (CDRS) of the U.S. Department of Defence.

LOWERING THE “LOWER EXPLOSION LIMIT”

Military applications which contain explosives require extra precaution, therefore the military specifies a Lower Explosive Limit (LEL) of less than 10%.

The Ethafoam® M-Series grade products were designed to specifically address the less than 10% LEL (Lower Explosion Limit) of residual blowing agents required for enclosed military applications. Certification is provided with each shipment of Ethafoam® M-Series products.

Sealed Air utilizes a proprietary process which enables Ethafoam® M-Series foams to meet the less than 10% LEL requirement. These processing steps not only speed up the evacuation of the blowing agent, but also provide excellent dimensional stability throughout the life of the product.

MINIMAL CREEP LOSS FOR RELIABLE CUSHIONING PROTECTION

Compressive creep is used to measure the cushioning performance of a packaging material placed under a constant load over an extended period of time. A packaging material with creep loss of 10% or less has consistent cushioning performance over an extended period of time. Ethafoam® foams compressive creep loss (in compliance with AA-59136) measures below 10% providing consistent, reliable cushioning performance over an extended period of time for increased product protection.

THE CALL

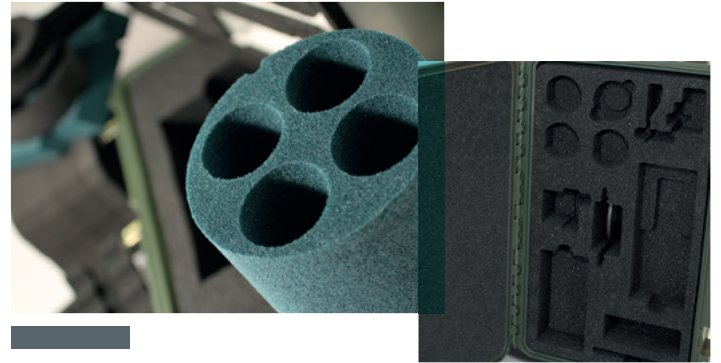
ALWAYS AT THE READY

Sealed Air understands that a majority of military applications do not have set release dates; they can be deployed at any time, sometimes months or even years after being packaged. Ethafoam® M-Series foams meet this challenge by ensuring the integrity of products over time.

Ethafoam® M-Series foams can be used in many different configurations or existing container designs without affecting shock or vibration protection. A wealth of existing design criteria can be applied when developing new systems for protecting sensitive items during shipping and storage.

LONG-LASTING ANTI-STATIC PROPERTIES

Ethafoam® M-Series foam products are also available with anti-static protection. This feature is essential in protecting sensitive electronic components from static charges and vibration. The M-1 FRAS product provides both fire-retardant and anti-static properties.



Physical Properties*	Test Method	M1	M3	M4	M5
Standard Thickness (in.)		50mm (2")	50mm, 75mm, 100mm (2", 3", 4)	50mm (2")	50mm (2")
Standard Width* (in.)		600mm x 1200mm (24" & 48")	600mm (24")	600mm (24")	600mm (24")
Standard Length (in.)		2750mm (108")	2750mm (108")	2750mm (108")	2750mm (108")
Colour		Black	Black	Black	Black
Compression Strength (psi)	ASTM D3575-08	10	17	28	60
Vertical @25%	Suffix D	18	28	45	90
Vertical @50%					
Compression Set (%)	ASTM D3575-08 Suffix B	< 20	< 15	< 15	< 15
Creep (%) (1000 hours)	ASTM D3575-08 Suffix BB	< 10 @ 2.5 psi	< 10 @ 5.0 psi	< 10 @ 10 psi	< 10 @ 20 psi
Tensile Strength (psi) @ 1/2 inch thickness (md/cmd)	STM D3575-08 Suffix T	31	43	65	120
Tear Resistance (lb/in) @ 1/2 inch thickness (across grain)	ASTM D3575-08 Suffix G	11	17	22	35
Density (lb/FT ³ - kg/m ³)	ASTM D3575-08	2.2/35	4.0/65	7.0/105	9/146
Cell Size (mm)	ASTM D3576-4 Modified	1.5	1.4	1.1	1.0
LEL (%)		< 10	< 10	< 10	< 10
Water Absorption (lb/ft ²)	ASTM D3575-08 Suffix L	< 0.3	< 0.2	< 0.2	< 0.2
Thermal Stability (%)	ASTM D3575-08 Suffix S	< 2	< 2	< 2	< 2
Static Decay (Anti-Static) (seconds)	EIA Std. 541 Appendix F	< 2	< 2	< 2	< 2
Surface Resistivity (ohms/sq) (Anti-Static)	EIA Std. 541 Section 4.3	1.0 × 10 ⁹ - 1.0 × 10 ¹³	11.0 × 10 ⁹ - 1.0 × 10 ¹³	1.0 × 10 ⁹ - 1.0 × 10 ¹³	1.0 × 10 ⁹ - 1.0 × 10 ¹³
Thermal Conductivity (K value) (BTU-IN / HR-FT ² - °F)	ASTM C518-91	.43	.43	.43	.43
Thermal Resistivity (R Value) (HR-FT ² - °F / BTU)	ASTM C518-91	2.3	2.3	2.3	2.3

The data presented for this product is for unfabricated Ethafoam® polyethylene foam.

While values shown are typical of the product, they should not be construed as specification limits.

*M1 - 4" is also available in 48" width.

FIVE-STAR FABRICATION NETWORK

The military requires very tight dimensional tolerances and high precision on fabricated parts, as well as having a quality management system in place. Sealed Air proudly partners with a team of sophisticated fabricators that make up our Military Fabricator Network. Each of these specialized Military Fabricator Network partners meet the rigorous demands of the military and have specialized access to the Ethafoam® M-Series foams. By combining superior Ethafoam® performance with sophisticated Military Fabricator Network design and precision, we ensure the leading product protection.

HOW FABRICATORS ENLIST

Sealed Air vets the fabricator in our network annually to ensure Ethafoam® M-Series products for the military are processed with the highest levels of precision, quality control and state of the art equipment.

To learn more about our Military Foam Fabricator Network, please contact your local Sealed Air District Sales Manager.




PARTNERS IN A BETTER TOMORROW

REDUCE, REUSE, RECYCLE

Sealed Air makes every effort to ensure that waste packaging does not end up in a landfill. Ethafoam® products are non-crosslinked, meaning they can be recycled in our closed loop system. Our Packaging Design Centres will work with you to make sure you get a package that has maximum protection with minimum material. All Ethafoam® products can be reused multiple times before experiencing any degradation in their protective qualities.

WE HAVE DESIGNS ON SERIOUS SOURCE REDUCTION

With over 20 Packaging Design Centres worldwide, Sealed Air is committed to being your partner in packaging by designing cost-efficient packaging. Our services include design, prototyping and testing, as well as a network of trusted fabricator partners that can deliver what you need, time and time again.

 **ETHAFOAM®
M-SERIES
FOAMS ARE
DESIGNED FOR
RECYCLING***

To learn more visit
www.recyclepefoam.com

*Where recycling facilities are in place

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