



ETHAFOAM™
packaging products

Density 2.3 pcf (36.8 kg/m³)
Maximum Loading 2.5 psi (17.5 kPa)
Color Blue-Gray

ETHAFOAM™ M1 FR/AS Polyethylene Foam

ETHAFOAM™ M1 FR/AS polyethylene foam is a strong, resilient, medium-density 2.3 pcf (36.8 kg/m³), closed-cell foam. Specially formulated to meet the stringent military and blowing agent requirements (less than 10% LEL), it combines anti-static and flame-retardant properties with superior performance. ETHAFOAM M1 FR/AS is designed as a material for cushioning components in packaging applications for loadings up to 2.5 psi (17.5 kPa).

ETHAFOAM M1 FR/AS is formulated with anti-static properties to safely protect sensitive military electronics equipment during shipment and storage. ETHAFOAM M1 FR/AS also contains flame-retardant additives and has outstanding dimensional stability and recovery characteristics that provide optimal cushioning protection against repeated impacts. To achieve optimum performance, Dow recommends that qualified packaging engineers design the total packaging solution.

Size Available in Blue-Gray (Planks):
2" x 24" x 108"

Product Features

ETHAFOAM™ M1 FR/AS polyethylene foam is a durable, lightweight, flexible, solid extruded product. The foam meets the requirements for U.S. Federal Standard FAR 25.853 (a) and meets or exceeds the requirements in CID A-A-59136, Class 1, Grade D, Type I. As the properties listed on the reverse suggest, ETHAFOAM M1 FR/AS offers excellent strength, resistance to creep under load, vibration and shock

absorbency, and water resistance characteristics. ETHAFOAM M1 FR/AS is part of an exclusive family of ETHAFOAM military packaging products that also includes ETHAFOAM™ M1, ETHAFOAM™ M1 AS, ETHAFOAM™ M3, ETHAFOAM™ M4 and ETHAFOAM™ M5. Each of these products has been designed and formulated to consistently meet the stringent shipping, storage and handling requirements for military applications.

ETHAFOAM M1 FR/AS is produced with Dow's patented *RapidRelease* manufacturing process. *RapidRelease* technology delivers a higher quality product with improved dimensional stability and safety. This process technology incorporates a patented CFC- and HCFC-free blowing agent system and an accelerated curing system that reduces residual blowing agents in ETHAFOAM products to trace amounts.

ETHAFOAM M1 FR/AS meets the requirements of the U.S. Clean Air Act Amendments. It is easily fabricated, impervious to most chemicals, non-abrasive and performs consistently over a wide range of temperatures.

ETHAFOAM M1 FR/AS is also reusable and completely recyclable because it is made of non-crosslinked polyethylene. Recycling operators may wish to segregate product with flame-retardant additives and process it separately. Flame-retardant additives in ETHAFOAM M1 FR/AS may increase polymer degradation in some high-temperature recycling operations.

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Product Information

Physical Properties of ETHAFOAM™ M1 FR/AS Polyethylene Foam			
Physical Properties†	Test Method	Direction	Value
Density	ASTM D3575, Suffix W, Method B; ISO 845		pcf (kg/m ³) 2.3 (36.8)
Blowing Agent Content	Dow Method		< 10% LEL
Static Decay Rate	EIA 541; US Federal Test Measured on plank surface		< 2 sec
Surface Resistance	ANSI/EOS/ESD-S11.11-1993;		< 10 ¹¹ ohms
Surface Resistivity	EIA 541; ASTM D257; Measured on plank surface		< 10 ¹² ohms/square
Fire Test Response Characteristics ^{††}	US CFR Title 14, 25.853 (a)		Pass
Compression Set	ASTM D3575, Suffix B (50% compr.); EN/ISO 1856 (23°C, 25% compr.)	Vertical	< 20% < 10%
Compressive Creep (1000 hrs @ 73°F [23°C])	ASTM D3575, Suffix BB	Vertical	< 10% @ 2.5 psi (17.5 kPa)
Compressive Deflection @ 10% @ 25% @ 50%	ASTM D3575, Suffix D	Average	psi (kPa) 7 (50) 9 (65) 18 (124)
Thermal Stability	ASTM D3575, Suffix S; ISO 2796		< 1.5% < 2%
Thermal Conductivity @ 75°F (24°C) @ 23°F (-5°C)	ASTM D3575, Suffix V; EN 28301; ISO 2581	Vertical	BTU•in/hr•ft ² •°F (W/m ² K) 0.42 (0.06) 0.37 (0.05)
Water Absorption	ASTM D3575, Suffix L; ISO 2896; ASTM C272		lb/ft ³ (kg/m ³) 0.3 (1.5) < 3% by volume
Buoyancy	ASTM D3575, Suffix AA		pcf (kg/m ³) 58 (930)
Tensile Strength @ peak	ASTM D3575, Suffix T; ISO 1798	Average	psi (kPa) 32 (220)
Tensile Elongation	ASTM D3575, Suffix T; ISO 1798	Average	50%
Tear Strength	ASTM D3575, Suffix G	Average	lb/in (N/mm) 10 (1.75)

†The data presented for this product are for unfabricated ETHAFOAM polyethylene foam products. While values shown are typical of the product, they should not be construed as specification limits.

††These numerical laboratory fire-test-response characteristics are not intended to reflect hazards presented by this material under actual fire conditions.

For information on products, design assistance and testing services available from Dow, contact us at: 1-866-PKG-FOAMS (754-3626) or www.ethafoam.com

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WARNING: ETHAFOAM polyethylene foam products are combustible and may constitute a fire hazard if improperly used or installed. During transportation, storage, installation and use, these products should not be exposed to open flame or other ignition sources.

ETHAFOAM PACKAGING PRODUCTS
THE DOW CHEMICAL COMPANY
P.O. Box 1206 • Midland, MI 48641-1206 • USA
www.ethafoam.com



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