



General Purpose All Acrylic Elastomeric Roof Coating

Energy Shield
Systems

For Professional Use Only

DESCRIPTION

- A high quality, plasticizer-free, single component, water-based, 100% acrylic elastomeric coating for spray brush or roller application.
- Designed to provide a long-lasting flexible membrane that will retain this flexibility even in the harshest climatic conditions.
- Formulated utilizing specialized pigments and biocides to provide maximum UV resistance and minimize discoloration from dirt accumulation.
- Has excellent adhesion to most surfaces including metal, most single-ply roofs, wood, and concrete.
- Has the unique ability to “breathe,” providing a completely watertight membrane while allowing trapped moisture to escape.

RECOMMENDED USES

Energycoat EC-50 is designed as a protective membrane for most roofing surfaces including galvanized metal, concrete, PVC, Hypalon, EPDM, polyurethane foam, and primed smooth and granulated asphaltic surfaces. Check with your Everest representative for primer recommendations.

Property	Test Method	Result
Volume Solids	ASTM D-1653	50.0 \pm 2%
Weight Solids	ASTM D-1644	63.4 \pm 2%
Tensile Strength	ASTM D-2370	300 \pm 20 PSI
Elongation	ASTM D-2370	200 \pm 25%
Permeability	ASTM D-1653	14 \pm 3
Tear Resistance	ASTM D-624	95 \pm 3 PSI
VOC	EPA Method 24	< 50 g Liter
Low Temperature Flexibility (-15', 1/2 in mandrel, 1000hrs weathering)		Pass
Hardness (Shore A)	ASTM D-2240	50 - 55
Reflectivity	ASTM C-1549	86%
Emittance	ASTM C-1371	.90
SRI	Calculated	107
Viscosity		110 \pm 10 KU
Density		12.1 lbs per gallon
Flashpoint		None
Shelf Life (When stored between 40°F and 70°F (4°C - 21°C)).		24 months (Unopened)
Clean Up		Water

COLORS

Standard Colors: White, Gray, and Tan
Custom Colors are available for an additional charge.

PACKAGING/SHIPPING INFORMATION

CONTAINER SIZE	SHIPPING CLASS
55 Gallon drum (208.2 liters)	Class 55
5 Gallon pail (18.9 liters)	Class 55



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SURFACE PREPARATION

General: Surfaces to be coated should be dry, free of dust, dirt, oil, loose granules, gravel, peeling coating, and other foreign matter. All wet insulation or foam should be removed and replaced with like materials.

For optimal results power wash all surfaces with a minimum of 2000 psi using a wide fan tip. All necessary precautions should be taken to avoid damage to the roof system. Mildew should be treated with a bleach solution (1 part bleach, 2 parts water) and rinsed thoroughly. Patch and repair cracks or holes with appropriate sealants or caulking materials.

Masonry: Allow fresh masonry to cure a minimum of 30 days, prime with Everprime GP.

Metal: Rusty metal must be cleaned with a wire brush and primed with Everprime Metal.

EPDM: Prime with Everprime EP primer/cleaner, ensure no primer residue remains.

PVC, Hypalon, aged TPO: Prime with Everprime SP.

Polyurethane foam: Apply directly (must be coated within 24 hours of installation).

Granulated Asphalt: Base coat with Evercoat GS Base.

Smooth Asphalt: Base coat with Evercoat GS Base.

Other: For other substrates refer to the Everest Primer Recommendation table.

APPLICATION

This product may be brushed, rolled, or sprayed on a clean, dry surface. For details, see Equipment Recommendations at the end of this sheet. If sprayed, the material should be at least 75°F. Before applying an additional coat, the previous coat must be completely dry and cured. If any contamination is present on the cured surface, it must be washed and completely dry before the application of subsequent coats.

Application Properties

Yield (1 gal to 100 sq ft)	8.0 dry mils
Dry Time (75° F)	90 mins @ 50% humidity
Recoat Window	>6 hrs
Complete Cure	30 days

COVERAGE RATE

Apply Energycoat EC-50 at the rate of 1.5 gallons per 100 sq. ft. (24 wet mils). Surface texture and wind will affect applied mil thickness.

ENVIRONMENTAL CONDITIONS

This product cures by water evaporation only. The product must not be applied when the ambient temperature is below 50°F or if there is any possibility it could fall below 32°F within 24 hours of application. Application is not recommended if rain or dew is likely to occur before the product dries. In high humidity conditions, late afternoon applications should be avoided as overnight dew formation on an uncured surface can cause coating wash-off. On marginal days, multiple applications of thin coats can ensure proper drying before rain or overnight freezes.

PONDED WATER

- ESS Systems warranties do not cover damage due to ponding water.
- The National Roofing Contractors Association considers ponding water on any roof unacceptable. (See the NRCA Roofing and Waterproofing Manual).

LIMITATIONS

The surface must be clean and dry. Application is not recommended on roofs with slopes less than 1/8 in 12 or where ponded water is present. Do not apply over wet substrates or when inclement weather is imminent. Complete cure of Energycoat EC-50 requires complete evaporation of water. Cool temperatures and high humidity retard cure. In addition, this product is not recommended for use without a vapor barrier in cryogenic tank or cold storage roofing applications. It is not intended for use as a thermal barrier.

SAFE PRACTICES

This product is designed for professional installation. Before working with this product, you must read and become familiar with the available information on its risks, proper use, and handling. Information sources include but are not limited to MSDS and product labels. More resources are available at polyurethane.org, sprayfoam.org, energyshieldsystems.com, or by contacting Energy Shield Systems directly.

EQUIPMENT

Minimum requirements:

Brush

- Synthetic filament

Roller

- 1¼" nap roller

Spray

- 30:1 fluid-to-air ratio capable pump
- 2 1/2 gallons or more per minute (continuous)
- Filter screen 30 mesh or larger
- Hose rated to 2x maximum pump pressure
- Hose lining should be compatible with coating and required cleanout materials
- Hose lengths: (Largest diameter at pump)
 - 3/8 minimum 6 ft wip
 - 3/8 minimum I.D. up to 75 feet
 - 1/2 minimum I.D. up to 200 feet
 - 3/4 minimum I.D. over 200 feet
- Spray gun: Graco Hydra Mastic or equivalent
- Spray Tip:
 - Reversible self-cleaning type
 - Orifice size of .027 to .039
 - Fan angle of 40° to 50°
- Always use components rated for pump pressures

To the best of our knowledge, all technical data contained herein is true and accurate as of the date of issuance and subject to change without prior notice. Users must contact Energy Shield Systems to verify correctness before specifying or ordering. We guarantee our products to conform to the quality control standards established by Energy Shield Systems Products. We assume no responsibility for coverage, performance, or injuries resulting from use. Liability, if any, is limited to the replacement of the product. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY ENERGY SHIELD SYSTEMS EXPRESSED OR IMPLIED; STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.