



Roofing & Building  
Maintenance Products

# Uni+Shield

*TRI-POLYMER*

High  
Performance  
Tri-Polymer  
Modified  
Bitumen  
Roofing



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## TRI-POLYMER

### High Performance Modified Bitumen Roof Membrane

- superior “tri-polymer” formulation . . . not one, but *three* high performance polymer modifiers
- up to five times thicker than other membranes
- super strong, premium quality polyester core
- unsurpassed seam reliability
- includes ZHD-7 . . . SWEPCO’s exceptionally effective oxidation inhibitor
- made in compliance with SWEPCO’s industry leading ISO 9000 quality systems
- suitable for both new and maintenance systems
- self-bonding . . . no adhesives, glues or sealants
- fast installation, fewer installation problems
- superior, long term maintainability
- non-prorated, long term warranties
- preferred by quality conscious contractors & knowledgeable property owners and managers

The perfect roof membrane. If it existed, it would be tough enough to endure the abuse of nature and man. It would have unsurpassed seam integrity. It could be installed without expensive or problematic adhesives, chemicals or mechanical anchoring systems. It would be formulated with special ingredients that effectively retard the drying effects of sun and aging. It would be made to the tightest manufacturing specifications in the industry in order to insure consistent quality and reliably high performance. It would be compatible with conventional, readily available protective coatings and maintenance materials. It would be versatile enough to be used in a wide range of applications for both new roofing and retrofit of existing roofs. It would be so fast to install that it would reduce installation costs. It would be so easy to install that it would reduce installation related problems. It would be backed by a non-prorated, long term warranty. And, finally, it would be easy to inspect and economical to maintain both during and beyond its warranted service life.

That’s a lot to ask of a roof membrane. But it does exist today. And it is called SWEPCO Uni+Shield Tri-Polymer Modified Bitumen Roof Membrane.

SWEPCO Uni+Shield Tri-Polymer Modified Roof Membrane is a premium quality modified bitumen roof membrane which provides the benefits most desired by knowledgeable property owners and professional roofing contractors.

# Millions of Square Feet In Reliable Service Throughout The World Since 1982 . . .

**A Thicker, Tougher, Stronger Membrane.** SWEPCO Uni+Shield is up to five times thicker than other membranes. And SWEPCO's polyester reinforcing core is more than three times as strong as fiberglass reinforcements used in other modifieds and sheet membranes. The result is outstanding puncture resistance, tensile strength and elongation and extraordinary resistance to expansion, contraction and rapid thermal shock.

**Unsurpassed Seam Integrity.** A simple, but effective "heat welding" technique insures long term seam strength and reliability. "UltraSeal", SWEPCO's highly refined surface design, insures uniform heat distribution and positive fusion of seams, laps and flashing assemblies. Wherever two pieces of Uni+Shield touch, they fuse together to become a single piece. So Uni+Shield seams can't separate or delaminate like materials that are glued together with unreliable adhesives and cements.

**Premium Quality Formulation.** SWEPCO Uni+Shield's formula is the result of years of development, refinement and testing, all targeted at creating the world's finest roofing membrane.

***Not One, But Three Superior Polypropylene Modifiers.*** Uni+Shield contains select waterproofing asphalt which has been "modified" with three premium grade polypropylene thermoplastic polymers. These carefully selected and processed modifiers - the finest available in the world - chemically enhance the natural characteristics of the asphalt, providing low temperature flexibility, high temperature resistance and bondability that can't be achieved without them. This important feature sets Uni+Shield apart from other modified bitumen products, which typically use only one, mass produced modifier.

***ZHD-7 adds extra life.*** This exclusive SWEPCO ingredient slows oxidation which causes premature hardening and deterioration of other membranes. So SWEPCO Uni+Shield will remain resilient and waterproof longer.

**A Versatile, Lightweight New Roof.** Used in both multi-ply and single-ply new roof installations, SWEPCO Uni+Shield provides light weight, unsurpassed performance and exceptionally cost effective service life.

**Cost Effective Repair of Existing Roofs.** SWEPCO Uni+Shield can make many problem roofs reliable again without expensive tear-offs. In many cases, a simple, cost effective Uni+Shield overlay is all it takes.

**Fast, Problem Free Installation.** SWEPCO Uni+Shield comes ready to apply. No temperamental adhesives or problematic chemical sealants. And there are fewer installation steps, so it goes down fast. That means lower installation costs and fewer opportunities for application error. SWEPCO Uni+Shield roofs get done right, because they are easier to do right.

**Costs Less To Inspect & Maintain.** A SWEPCO Uni+Shield roof is a modern, smooth surface roof. This means it's easier and less costly to inspect and maintain. Gone are the headaches and extra costs associated

with gravel or ballast rock. With a Uni+Shield roof, periodic inspection takes minutes, not hours, and reveals any damage that may exist when it is easy and much less costly to repair.

And choosing Uni+Shield doesn't commit an owner to use of exotic and expensive proprietary products to maintain his roof. That's because SWEPCO Uni+Shield is compatible with readily available protective coatings and maintenance products. And there is none better than SWEPCO Aluminum Roof Coating to make a SWEPCO Uni+Shield roof last the life of the building itself.

**World-Class Reliability & Performance.** SWEPCO Products are manufactured using the industry's most rigid **ISO 9000 Certified Quality Standards**. With guarantees second to none and systems qualifying for various **Underwriter's Laboratories** and **Factory Mutual** classifications, SWEPCO Uni+Shield offers today's property owners and managers their best choice for trouble-free, long-term roof care.



Technologically advanced.  
Smooth surface.  
Seamless.  
Energy efficient.

Indefinitely maintainable roof systems that lower the true cost of ownership.



Coat SWEPCO Uni+Shield with SWEPCO Aluminum Roof Coating and get up to 20 years of energy saving, non-prorated guaranteed waterproofing.



## Uni+Shield Tri-Polymer Modified Bitumen Roofing

### PURPOSE & DESCRIPTION

SWEPCO Uni+Shield Tri-Polymer Modified Bitumen Roof Membrane is a prefabricated modified bitumen waterproofing membrane, suitable for reroofing many existing roof surfaces and for new roof construction. It is installed using a special heat welding technique, which heats the asphalt on the underside of the roll to a liquid state, allowing it to "fuse" to the surface below.

SWEPCO Uni+Shield Roof Membrane is formulated with a select asphalt, modified with three carefully selected and processed synthetic polymers, mineral stabilizers, oxidation inhibitors and reinforced with a tough, spun bonded polyester core.

### PACKAGING

Shipped in 39-inch wide (1 m) by 33-feet long (10 m) rolls.

### TYPICAL PHYSICAL PROPERTIES

Weight, lb/100 ft <sup>2</sup> (kg/m <sup>2</sup> ) .....	80 (4)
Weight, lb/roll (kg) .....	88 (40)
Thickness, mils (mm) .....	157 (4)
Composition of Modified Bitumen	
Bitumen, % .....	70
Polymers, % .....	30
Oxidation Inhibitor .....	ZHD-7
Breaking Strength, md, lbf (N) (CSGB 37-GP-56M/ASTM D-412 Mod) .....	220 (980)
Breaking Strength, xd, lbf (N) (CSGB 37-GP-56M/ASTM D-412 Mod) .....	165 (736)
Elongation, %, xd .....	62
Elongation, %, md .....	57
Water resistance, absorption, grams (ASTM D-618) .....	0
Water resistance, dimensional change (ASTM D-570) .....	Nil
Low Temperature Flexibility, 1 in. (2.54 cm) mandrel, @14°F (-10°C) .....	Pass
Water vapor transmission, g .....	0.1
Hardness, Shore A .....	45
Dynamic impact (puncturing) 3.6 ft (110cm) (4.9J) (ASTM D-2240) .....	Pass
Dimensional Stability, 5, max, 16 hrs	
@176°F (°C) unrestrained (UEATC No. 127:1983) .....	0.5

### LAP JOINT STRENGTH

5 days conditioning, md, lbf (N) (CSGB 37-GP-56M/ASTM D-412 Mod) .....	215 (960)
Immersion, @122°F (50°C), 5 days, md, lbf (N) .....	215 (960)
Immersion, @122°F (50°C), 5 days plus	
5 freeze thaw cycles, md, lbf (N) .....	215 (960)
Accelerated weathering, 3000 hours, Q. U. V. (ASTM G-23)	
Cracking, blistering .....	None
Breaking strength, retention of original .....	90%
Elongation, retention of original .....	90%
Freeze/Thaw, 50 cycles (ASTM D-6673) .....	Pass

### UNI+SHIELD MEETS THE FOLLOWING REQUIREMENTS

- Factory Mutual - U.S.A.
- UL Listing - U.S.A.
- EMPA - SWITZERLAND
- Agreement Board - UNITED KINGDOM
- CGSB 37-GP-56M - CANADA

Note: These values are typical of our current production. Deviation within acceptable industry standards should be expected. Southwestern Petroleum Corporation reserves the right to alter these specifications without advance notice.

Please consult the Southwestern Petroleum publication entitled "Application Guide for Uni+Shield Roof Systems" for complete application information on approved specifications and installation instructions. Do not under any circumstances attempt use of this product without first readying this application guide in its entirety.



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