

PRODUCT DATA BULLETIN II

SWEPCO FLEX•SHIELD® ROOF COATING

DESCRIPTION AND PURPOSE:

SWEPCO Flex•Shield® Roof Coating is a superior mineral colloid asphalt emulsion roof coating, manufactured from premium quality waterproofing asphalt, High Strength Micro Fibers, a select grade of bentonite and other special chemical and mineral ingredients which insure a durable product. It is especially formulated to waterproof, protect and preserve both new roofs and properly prepared existing roofs. As a maintenance coating, it is compatible with smooth surface asphalt roofs; concrete and corrugated asbestos cement roofs; gravel, granule and other aggregate covered asphalt roofs; granular surfaced roll roofing roofs; and exposed metal roofs. It is used with other SWEPCO Roofing Products in a number of applications for both roof maintenance and new roofing. Consult the appropriate application literature for more information.

OUTSTANDING FEATURES:

**IT DOESN'T JUST
WATERPROOF, IT MAKES
ROOFS LAST LONGER**

SWEPCO Flex•Shield® Roof Coating is more than just a waterproofer for industrial and commercial roofs. It's an economical protective coating. In addition to waterproofing both new and existing roofs, it protects costly roof membranes, insulation and decks from deterioration. Applied in time and as an integral part of a planned maintenance program or a new roof system, it makes both old and new roofs last longer by protecting them from moisture

penetration, oxidation and erosion, the most common causes of roof failure.

OUTLASTS CONVENTIONAL COATINGS

SWEPCO Flex•Shield® Roof Coating outperforms conventional asphalt waterproofing materials in a number of ways, the most important of which is service life. Flex•Shield® Roof Coating is a modern mineral colloid emulsion coating with superior weathering characteristics. Its outstanding resistance to oxidation slows down the natural aging process and makes it last longer. It waterproofs without blistering or peeling because its unique film doesn't trap damaging moisture. And it has superior natural resistance to cracking, alligating and erosion. These natural performance features create a protective coating which lasts longer than most types of waterproofing coatings.

SUPERIOR FIRE RESISTANCE

In industrial and commercial fire situations, SWEPCO Flex•Shield® "chars in place" instead of melting, running, spreading the flame and feeding the fire. It meets or exceeds the American Society of Testing & Materials Specification D-1227, Type IV, and Canadian Government Specification 37-GP-28M.

EASIER, FASTER, LESS COSTLY APPLICATION

Application of SWEPCO Flex•Shield® Roof Coating is easy, fast and simple. It's a "cold process" coating which means that, unlike "hot-mop" asphalts, it is applied just as it comes from the container. Ease of application means reduced costs for contract labor. But ease



of application can mean even more substantial savings for those who prefer to take full advantage of it by having their own maintenance staff handle application. General maintenance personnel can get professional results by following the simple instructions furnished on every container.

REDUCES ROOF MAINTENANCE COSTS

SWEPCO Flex•Shield® Roof Coating's outstanding thermal stability, weathering and fire resistance and compatibility with modern energy efficient reflective coatings make the use of gravel unnecessary. As a result, it eliminates many of the problems and much of the cost associated with typical gravel surfaced roofs. Periodic inspection becomes a task measured in minutes instead of hours. And, when maintenance does finally become necessary, it costs less

because it takes less time. Because it's formulated with maintenance in mind, Flex•Shield® Roof Coating insures continued savings well beyond its own service life.

ELIMINATES ROOFING POLLUTION

SWEPCO Flex•Shield® Roof Coating has another important advantage. It won't pollute the environment. It's not heated during application like "hot-mop" asphalts, so there are no foul odors polluting the area. And it doesn't contain the heavy concentrations of petroleum solvents used in still other types of coatings. Besides making other products more expensive, these solvents pollute the environment. And because Flex•Shield® Roof Coating doesn't contain these harmful solvents, it takes less petroleum to make ... up to 30% less, in fact.

GENERAL DATA:

TYPICAL PHYSICAL PROPERTIES

Viscosity, Stormer, @ 77°F (25°C), KU, ASTM D-562	120-140
Specific Gravity, @ 60°F (15.5°C), ASTM D-70	1.02
Unit Weight, lb/gal, ASTM D-70	8.5
Unit Weight, kg/liter, ASTM D-70	1.02
Drying Time, to Touch, hours	2-4
Drying Time, Through, hours	24
Flash Point	Water Base - Not Applicable
Wet Film Thickness, 1 gal/100 ft ² , mil	16
Wet Film Thickness, 1 liter/m ² , mm	1
Dry Film Thickness, 1 gal/100 ft ² , mil	8
Dry Film Thickness, 1 liter/m ² , mm	0.5
Color, Wet	Brown
Color, Cured	Black
Odor	Pungent

TYPICAL PERFORMANCE PROPERTIES

Workability	Permits application by brush, roller or spray
Flexibility, @ 32°F (0°C), ASTM D-2939	No cracking or flaking
Heat Resistance, @ 212°F (100°C), ASTM D-2939 ...	No blistering, sagging or slipping
Adhesion to Dry or Wet Surfaces, ASTM D-1227	Excellent
Direct Flame Test, ASTM D-2939	Chars in place
Accelerated Weathering, hours, ASTM D-G53	4,000*
Peeling and Chipping	None
Erosion	Slight
Water Penetration	None
Chalking	Slight
Storage Stability	1 Year
..... (may develop some water separation which can be compensated for by mixing)	

*NOTE: This is roughly equivalent to eight years of exposure to ultra-violet radiation, heat and moisture generally encountered in field service.

GENERAL DATA:

TYPICAL CHEMICAL PROPERTIES

Non Volatile, % wt, ASTM D-2939	50
Volatiles, % wt, ASTM D-2939	50
Asphalt Portion Soluble in CS ₂ , % wt, ASTM D-4	99.9
Resistance to Mild Acid or Alkali	Good
Resistance to Water	Excellent
Resistance to Petroleum Solvents	Poor
Asphalt Contents, % wt, ASTM D-4	45
Stabilizers, % wt, ASTM D-4	5

APPLICABLE SPECIFICATIONS

ASTM D-1227, Type IV
Canadian Government Specification 37-GP-28M

APPLICATION INFORMATION:

IMPORTANT: SWEPCO Flex•Shield® Roof Coating is a premium-quality, asphalt emulsion coating designed to waterproof, protect and preserve both new and properly prepared old smooth surface asphalt roofs; concrete and corrugated asbestos cement roofs; gravel, granule or other aggregate covered asphalt roofs; granular surfaced roll roofing roofs; and exposed metal roofs. It is not designed for use on nor should it be applied directly to insulation, coal tar pitch roofs, wood surfaces, composition shingles or any other form of rigid shingles, such as wood, slate, cement, clay or asbestos-cement shingles. SWEPCO Flex•Shield® Roof Coating is used in a variety of applications both with and without a reinforcing mat. Instructions provided here relate to this product only. For complete instructions refer to the appropriate installation brochure or system specification sheet before using.

PREPARATION: The roof surface should be sound and should drain water freely. Because standing water accelerates deterioration of all asphalt roofing products, every effort should be made to isolate and correct the causes of any standing water or ponding on the roof. A minimum slope of 1/4 in. per foot (2%) is recommended. When this is not possible, SWEPCO Products can still be applied and will provide temporary protection for such areas. However, it must be understood that performance of SWEPCO Products cannot be guaranteed in any area of the roof subject to standing water. No area should be exposed to continually leaking equipment. Loose gravel, granules or aggregate must be removed. The surface must then be thoroughly cleaned free of all dust, dirt and loose debris. All blisters, cracks, split seams and other surface irregularities should be repaired with SWEPCO Flex•Shield®

Patching Compound and Heavy Duty Patching Fabric. The surface may then require priming with SWEPCO Flex•Shield® Primer, depending upon the system being installed. (For complete information, see instruction labels for SWEPCO Flex•Shield® Patching Compound, Heavy Duty Patching Fabric and Flex•Shield® Primer and the appropriate SWEPCO installation brochure or system specification sheet.)

APPLICATION: SWEPCO Flex•Shield® Roof Coating is applied straight from the container with soft bristle roofing brushes, squeegees or airless spray equipment at the minimum coverage rate recommended below. It requires no heating or thinning, but will require mixing if it has been stored for some time. To insure proper application during hot weather, the roof surface should be dampened lightly and uniformly with clean water prior to application. Do not allow puddles to form and do not dampen such a large area that the water evaporates before application takes place. (For specific recommendations concerning spray application, contact Southwestern Petroleum Corporation.)

APPLICATION PRECAUTIONS: SWEPCO Flex•Shield® Roof Coating will freeze. It should not be applied in temperatures below 40°F (4°C). BECAUSE IT IS AN "EMULSION" TYPE ASPHALT PRODUCT, SWEPCO FLEX•SHIELD® ROOF COATING CAN "WASH-OFF" IF SUBJECTED TO RAIN OR HEAVY DEW BEFORE IT IS SUFFICIENTLY CURED. It should therefore not be applied in rainy weather or if rain is expected before complete curing can take place. In sunny conditions, curing normally takes only 24 hours, but in cold, cloudy, damp, foggy or humid conditions, curing can take much longer. Safest

APPLICATION INFORMATION

(Continued)

application is on a warm sunny day with no forecast of rain for 24-48 hours. Avoid thick build-ups or puddles of the coating as this can cause shrinkage cracking.

MINIMUM COVERAGE RATES: Minimum recommended coverage rates vary from a low of 1.75 gal. per 100 sq. ft. (.71 liter/m²) to a high of 9 gal. per 100 sq. ft. (3.68 liter/m²) in two coats, depending on the type of surface and type of system being installed. Consult the appropriate SWEPCO Roof System installation instructions for required minimum coverage rates.

CURING: In sunny conditions, SWEPCO Flex•Shield® Roof Coating normally cures within 24 hours of application, but in cold, cloudy, damp, foggy or humid conditions, curing can take much longer. It should be allowed to cure for a minimum of 14 days before application of other protective or reflective coatings such as SWEPCO Aluminum Roof Shield, SWEPCO White Acrylic Coating or SWEPCO White Roof Shield. The surface will become tacky on warm days beyond this 14-day minimum curing period. For this reason, application of reflective coatings should only be attempted in early morning hours or on cooler days when surface tackiness is at a minimum.

STORAGE: SWEPCO Flex•Shield® Roof Coating has a minimum shelf life of one year provided containers are kept tightly sealed and protected against high temperatures. This product will freeze and should be stored where temperatures will not drop below 35°F (2°C). Storage beyond six months may cause the product to thicken. In such cases, the product should be diluted with clean potable water at a rate not to exceed one part water to six parts coating. Dilute slowly and mix thoroughly, adding only enough water to permit application at the proper coverage rate. Mechanical mixing is highly recommended. In no event should the product be diluted beyond the maximum dilution rate of 1:6 as this will void any guarantee to which the product may be subject.

ADDITIONAL INFORMATION: For additional information or recommendations, write: Southwestern Petroleum Corporation, P.O. Box 961005, Fort Worth, Texas 76161-0005; Southwestern Petroleum Canada Ltd., 87 West Drive, Brampton, Ontario, Canada L6T 2J6; or N. V. Southwestern Petroleum Europe S.A., P.O. Box 3, B-2390 Oostmalle, Belgium.

SAFETY PRECAUTIONS: Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective goggles, gloves and clothing. Avoid prolonged breathing of vapors. Use with adequate ventilation or approved respirators in confined areas. Do not take internally. Store and use away from heat, open flame or spark sources. Close container tightly after each use. Do not transfer to unlabeled or breakable containers. Use only for purposes intended. Keep out of reach of children.

EFFECTS OF OVEREXPOSURE:

Contact with eyes or prolonged or repeated contact with skin can cause irritation and inflammation. Prolonged breathing of vapors can cause respiratory difficulty, dizziness, headache, nausea, irritation of nose or throat, drowsiness, blurred vision and coma. Ingestion can expose person to an order of oral toxicity; aspiration into lungs can cause serious injury or death.

FIRST AID PROCEDURES:

Eye Contact - Flush with water for 15 minutes. If pain or redness persists, seek medical attention immediately. Skin Contact - Wash with soap and water after wiping off excess material. If irritation persists, seek medical attention. Inhalation - Remove to fresh air. If breathing difficulty persists, give oxygen or resuscitate and SEEK MEDICAL ATTENTION IMMEDIATELY. Ingestion - Induce vomiting. If vomiting occurs, keep head below hips to prevent aspiration. SEEK MEDICAL ATTENTION IMMEDIATELY.

PHYSICAL EMERGENCY PROCEDURES:

If ignited, extinguish with CO₂ or dry chemicals. Water or foam may cause frothing. Water may be used to keep containers cool or flush spills away from area of involvement.

Consult Material Safety Data Sheet (MSDS) for this product or call Southwestern Petroleum Corporation at (817) 332-2336 for further health and safety information.

