

PRODUCT DATA BULLETIN II

SWEPCO FLEX•SHIELD^{EM} ROOF COATING

DESCRIPTION AND PURPOSE:

SWEPCO Flex•Shield^{EM} Roof Coating is a superior elastomeric asphalt emulsion roof coating, manufactured from premium quality rubber-enhanced waterproofing asphalt which has been further fortified with High Strength Micro Fibers and other performance improving additives. It is designed for use in demanding applications which require enhanced elongation characteristics or where a product with elastomeric properties has been specified. As a maintenance coating, it is compatible with smooth surface asphalt built-up roofs; granule surfaced asphalt built-up roofs, modified bitumen roofs and metal roofs. It is also suitable for use in special systems designed for use on concrete roofs. Consult the appropriate system literature for more information.

OUTSTANDING FEATURES:

LATEST RUBBER-ENHANCED ASPHALT TECHNOLOGY

SWEPCO Flex•Shield^{EM} Roof Coating is a product of new technology which combines the many advantages of rubberized roofing products with the environmentally friendly, time proven performance advantages of liquid applied asphalt emulsions. This formulation gives Flex•Shield^{EM} Roof Coating the ability to elongate or stretch to as much as 350% of its original size to accommodate roof stresses and then recover to within 80% of its original size. And it provides this important performance feature without all of the disadvantages of sheet-installed rubber or plastic roofs, such as

seam failures, sheet shrinkage, corroding clamping bar assemblies or the need for heavy ballast rock.

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

SWEPCO Flex•Shield^{EM} Roof Coating is more than just a waterproofer for industrial and commercial roofs. It's a *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 roofs last longer by protecting them from moisture penetration, oxidation and erosion.

OUTLASTS CONVENTIONAL COATINGS

SWEPCO Flex•Shield^{EM} Roof Coating outperforms conventional asphalt waterproofing materials in a number of ways, the most important of which is service life. Flex•Shield^{EM} Roof Coating is a mineral colloid emulsion coating with superior weathering characteristics. Its outstanding resistance to oxidation slows down the natural aging process and makes it last longer. And it has superior natural resistance to cracking, alligating and erosion. These natural performance features create a protective coating which lasts longer than other types of waterproofing coatings.

EASIER, FASTER, LESS COSTLY APPLICATION

Application of SWEPCO Flex•Shield^{EM} 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.

REDUCES ROOF MAINTENANCE COSTS

SWEPCO Flex•Shield^{EM} Roof Coating's outstanding thermal stability, weathering resistance and compatibility with modern energy efficient reflective coatings make the use of gravel or other aggregate surfacings 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 min-

utes 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^{EM} Roof Coating insures continued savings well beyond its own service life.

ELIMINATES ROOFING POLLUTION

SWEPCO Flex•Shield^{EM} Roof Coating won't pollute the environment. It's not heated during application like "hot-mop" asphalts, so there are no foul odors. And it contains no solvents.

GENERAL DATA:

TYPICAL PHYSICAL PROPERTIES

Viscosity, Stormer, @ 77°F (25°C), KU, ASTM D-562	90-140
Specific Gravity, @ 60°F (15.5°C), ASTM D-70	1.04
Unit Weight, lb/gal, ASTM D-70	8.7
Unit Weight, kg/liter, ASTM D-70	1.03
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
Elongation, %	350
Recovery, %	80
Tensile Strength, lb/in ² , unreinforced coating	350
Tensile Strength, lb/in ² , reinforced coating	1,200
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.

TYPICAL CHEMICAL PROPERTIES

Non Volatile, % wt, ASTM D-2939	45
Volatiles, % wt, ASTM D-2939	55
Asphalt Portion Soluble in CS ₂ , % wt, ASTM D-4	99.9

GENERAL DATA:

Resistance to Mild Acid or Alkali	Good
Resistance to Water	Excellent
Resistance to Petroleum Solvents	Poor
Asphalt Contents, % wt, ASTM D-4	40

APPLICABLE SPECIFICATIONS

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

APPLICATION INFORMATION:

IMPORTANT: SWEPCO Flex•Shield^{EM} Roof Coating is an elastomeric asphalt emulsion coating recommended for waterproofing smooth asphalt built-up, granule surfaced asphalt built-up, modified bitumen, metal and some concrete roofs. It is not designed for use on gravel covered asphalt, coal tar or other roof types not mentioned specifically above. It is used in a variety of applications both with and without a reinforcing membrane. Instructions provided here relate to this product only. Refer to installation brochure or system specification sheet for other important information.

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 granules or aggregate must be removed. The surface must then be thoroughly cleaned free of all dust, dirt, contaminants and loose debris. Blisters, cracks, split seams and other surface irregularities should be repaired with SWEPCO Flex•Shield^{EM} 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^{EM} Patching Compound, Heavy Duty Patching Fabric and Flex•Shield Primer and the appropriate SWEPCO installation brochure or system specification sheet.)

APPLICATION: SWEPCO Flex•Shield^{EM} Roof Coating is applied

straight from the container with soft bristle roofing brushes, squeegees or airless spray equipment at the 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^{EM} 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^{EM} 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 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.

COVERAGE RATES: Minimum recommended coverage rates vary from a low of 2.5 gal. per 100 sq. ft. (1.02 liter/m²) to a high of 6 gal. per 100 sq. ft. (2.46 liter/m²) in two coats, depending on the type of surface and type of system being installed. Do not apply any single coat at a rate greater than 3.0 gal. per 100 sq. ft. (1.22 liter/m²). Consult the appropriate SWEPCO Roof System installation instructions for required minimum coverage rates.

APPLICATION INFORMATION

(Continued)

CURING: In sunny conditions, SWEPCO Flex•Shield^{EM} 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 7 days before applying SWEPCO Aluminum Roof Shield, SWEPCO White Acrylic Coating or SWEPCO White Roof Shield. The surface will become tacky on warm days beyond this 7-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^{EM} 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 not be stored 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 Southwestern Petroleum Europe, 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. As vomiting occurs, keep head below hips to prevent aspiration. SEEK MEDICAL ATTENTION IMMEDIATELY.

PHYSICAL EMERGENCY PROCEDURE:

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.

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