

APPLICATION INFORMATION

(Continued)

STORAGE: SWEPCO Flex•Shield^{EM} Patching Compound has a minimum shelf life of one year provided containers are kept tightly sealed and protected from high temperatures. This product will freeze and should be not be stored below 35°F. (2°C).

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 No. 3, B-2390 Oostmalle, Belgium.

SAFETY PRECAUTIONS

HARMFUL OR FATAL IF SWALLOWED - IRRITANT - COMBUSTIBLE

Contains Petroleum Distillates

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 could be harmful; aspiration into lungs can cause serious injury of 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 - Do NOT 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.

FLEX•SHIELD^{EM} PATCHING COMPOUND

DESCRIPTION AND PURPOSE:

SWEPCO Flex•Shield^{EM} Patching Compound is an elastomeric asphalt emulsion waterproofing compound manufactured from premium quality rubber-enhanced waterproofing asphalt, High-Strength Micro Fibers and other mineral and chemical ingredients which insure the creation of a durable product. It is designed for use in demanding applications which require enhanced elongation characteristics or where a product with elastomeric properties has been specified. It is used as a highly versatile adhesive, sealer and filler in roof repair, maintenance and new construction on smooth asphalt, granule surfaced asphalt, modified bitumen, metal and concrete roofs. It is also suitable for temporary repair of existing EPDM and other rubber-type roofs.

OUTSTANDING FEATURES:

LATEST RUBBER-ENHANCED ASPHALT TECHNOLOGY

SWEPCO Flex•Shield^{EM} Patching Compound is a product of new technology which combines the many advantages of rubberized roofing products with the environmentally friendly, time proven performance advantages of asphalt emulsions. This special formulation gives Flex•Shield^{EM} Patching Compound the ability to elongate or stretch up to 118% of its original size to accommodate roof stresses and then recover to within 85% of its original size.

QUALITY INGREDIENTS ENHANCE PERFORMANCE

Another reason for SWEPCO Flex•Shield^{EM} Patching Compound's superior performance is the choice of raw materials used. Only the very finest ingredients are accepted. The formulation starts with a premium quality waterproofing asphalt carefully selected and refined for maximum resistance to the weathering cycle. The asphalt is then given elastomeric properties with the addition of highly effective rubber modifiers. The bentonite used is a special grade which comes from the purest bentonite deposits available.

IDEAL FOR A WIDE VARIETY OF ROOFING APPLICATIONS IN BOTH MAINTENANCE AND NEW CONSTRUCTION

SWEPCO Flex•Shield^{EM} Patching Compound should be used in maintenance or new roofing applications which require a product with enhanced elongation characteristics or when a product with elastomeric properties has been specified. When used with Heavy Duty Patching Fabric for additional reinforcement, it is exceptionally dependable for sealing cracks, blisters, open seams, fishmouths and either new or deteriorated flashings, at vents, skylights, pitch pans and other common stress points and trouble spots. Its flexibility and strong bond make it effective for sealing metal seams, gravel guards and flashing flanges, as well as caulking small cracks, copings, counter flashings and drainage gutters.



HELPS TAKE THE POLLUTION OUT OF ROOFING

SWEPCO Flex•Shield^{EM} Patching Compound is environmentally safe. It contains no solvents to pollute the environment.

EASY APPLICATION REDUCES ROOF MAINTENANCE COSTS

Because application is easy and simple, SWEPCO Flex•Shield^{EM} Patching Compound reduces roof maintenance costs. It requires no special preparation or equipment and no heating. It is applied straight from the container and troweled smooth. Ease of application reduces time and labor costs spent on maintenance or new construction.

GENERAL DATA:

TYPICAL PHYSICAL PROPERTIES

| | |
|---|---|
| Consistency, Cone Penetration @77°F (25°C) (ASTM D-217) | 290-320 |
| Specific Gravity, @60°F (15.5°C) (ASTM D-70) | 1.04 |
| Unit Weight, lb/gal (ASTM D-1475) | 8.6 |
| Unit Weight, kg/liter (ASTM D-1475) | 1.04 |
| Drying Time, to Touch, hours | 2-4 (Depends on temperature and humidity) |
| Drying time, Through, days | 1-7 (Depends on temperature and humidity) |
| Flash Point, °F | N.A. |
| Freezing Point, °F (°C) | 32 (0) |
| Wet Film Thickness, 1 gal/100 ft ² , mil (Calculation) | 16 |
| Wet Film Thickness, 1 liter/m ² , mm (Calculation) | 1 |
| Dry Thickness, 1 gal/100 ft ² , mil (Calculation) | 6.4 |
| Dry Thickness 1 liter/m ² , mm (Calculation) | 0.4 |
| Color, wet (Observation) | Dark brown to black |
| Color, dry (Observation) | Black |
| Odor (Observation) | Pungent |

TYPICAL PERFORMANCE PROPERTIES

| | |
|---|--|
| Workability | Permits smooth application by damp towel |
| Elongation, % (ASTM D-412, Die/C) | 118 |
| Recovery, % (ASTM D-412, Die/C) | 85 |
| Tensile Strength, lb/in ² | 350 |
| Behavior, @140°F (60°C) (ASTM D-466) | No blistering, sagging or sliding |
| Pliability, @32°F (0°C) | No cracking, flaking or loss of adhesion |
| Adhesion | Excellent |
| Accelerated Weathering, hours (ASTM G-53) | 4,000* |
| Film Appearance | Good |
| Peeling and Chipping | None |
| Erosion | Slight |
| Water Penetration | NIL |
| Storage Stability | 1 Year |

TYPICAL CHEMICAL PROPERTIES

| | |
|---|-------------------------|
| Non Volatile, % wt (by evaporation) (ASTM D-2939,8) | 45 |
| Volatile, % wt (by evaporation) (ASTM D-2939,8) | 55 |
| Oil Distillation, % wt (ASTM D-244) | NIL |
| Resistance to Mild Acids and Alkali | Good |
| Resistance to Water | Good |
| Resistance to Petroleum Solvents | Poor (Causes Softening) |
| Asphalt Portion | |
| % wt Soluble in CS ₂ (ASTM D-4) | 99.9 |
| Softening Point (ASTM D-36) | 110 |
| Penetration, @77°F, 100 grams, 5 seconds (ASTM D-5) | 90 |
| Type | Vacuum reduced |

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

APPLICATION INFORMATION:

IMPORTANT: SWEPCO Flex•Shield^{EM} Patching Compound is an elastomeric asphalt emulsion waterproofing compound, designed for use on 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. It is also suitable for temporary repair of EPDM and other rubber-type roof membranes.

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. The surface to be repaired must be thoroughly cleaned free of all dust, dirt, contaminants and loose debris. On granular surfaced roll roofing, all loose granules must be removed. On exposed metal surfaces, surface impurities such as rust and corrosion must be removed.

APPLICATION: SWEPCO Flex•Shield^{EM} Patching Compound is applied straight from the container with a plastic glove or a standard trowel. It requires no heating or thinning prior to application, but may require some mixing if water separation is observed. A slight amount of moisture on the glove or trowel is helpful in application and clean-up. Reinforcing flashings and deteriorated areas with SWEPCO Flex•Shield^{EM} Patching Compound and Patching Fabric is a three-step process. First, trowel a layer (approximately 3/16th of an inch or 0.5 cm thick) of SWEPCO Patching Compound. Second, embed into this layer of Patching Compound, a piece of SWEPCO Patching Fabric. Third, trowel another layer (same thickness as first layer) of Patching Compound over and beyond the Patching Fabric on all sides. The width of Patching Fabric required is determined by the type and size of the repair. Instructions for some common uses follow:

Repairing Flat Edge and Flange Type Protrusion Flashings —Compound and

Fabric must extend a minimum of 4 in. (10.16 cm) beyond existing flashing or 4 in. (10.16 cm) beyond metal flange anchoring metal work, whichever is greater. **Repairing Raised Edge, Wall or Curb Type Protrusion Flashing** —Compound and Fabric must extend well up under counter flashing and a minimum of 4 in. (10.16 cm) beyond existing flashing materials or 4 in. (10.16 cm) onto flat roof membrane, whichever is greater. **Repairing Blisters, Cracks, Open Seams** —Distorted roofing felts should be cut out, being careful to remove only enough of the original roof membrane to create a flat, sound surface. Allow sufficient time for any trapped moisture to evaporate thoroughly. Compound and Fabric should overlap sound existing surface a minimum of 4 in. (10.16 cm) on all sides. **Repairing Cracks, Cuts, Tears and Open Seams** —Permit any trapped moisture to evaporate before repairing the area. **ComSealing Metal Roof Joints** —Compound and 6 in. (15.24 cm) Fabric are usually sufficient for this application.

APPLICATION PRECAUTIONS: SWEPCO Flex•Shield^{EM} Patching Compound will freeze. It should not be applied in temperatures below 40°F. (4°C). Nor should it be applied in rainy weather or if rain is expected before complete curing can take place. Normally only 1-7 days is required for curing, but in cool, cloudy, damp or humid conditions curing can take longer. Avoid unusually heavy build-ups of the material as this can cause shrinkage cracking.

MINIMUM COVERAGE RATES: The amount of SWEPCO Flex•Shield^{EM} Patching Compound required depends on the width of Heavy Duty Patching Fabric used. The following figures include material for both layers of Patching Compound:

- When Using 6 In. (15.24 cm) Fabric** — 0.50 lb./lineal ft. (0.74 kg/m);
- When Using 12 In. (30.48 cm) Fabric** — 1.00 lb./lineal ft. (1.49 kg/m);
- When Using 36 In. (91.44 cm) Fabric** — 3.00 lb./lineal ft. (4.46 kg/m)

NOTE: These coverage rates are our minimum coverage rates. Do not under apply the product as this can adversely affect product performance and will negate any guarantee to which the product may be subject.

CURING: Curing varies with temperature and humidity. However, it is normally completely cured within 1 to 7 days.

CLEAN-UP: Remove from tools and other areas with soap and water before it cures and kerosene or mineral spirits after it cures.