

APPLICATION INFORMATION

Setting Posts, Bolts Or Other Fasteners -- Be sure hole is proper depth and allows a minimum 3/4 inch (1.9 cm) clearance on all sides of post, bolt or other fastener. Fill hole with HydraPlug. Immediately place object in hole, adjust for plumb as necessary and work HydraPlug firmly around base of object. After initial set, gently shave excess material level with floor or wall with wet trowel. Keep HydraPlug moist for a minimum of 15 minutes and allow a minimum five-hour set before applying significant stress.

APPLICATION PRECAUTIONS: Do not apply at temperatures below 40°F. (4°C) or store below 32°F (0°C). Not intended for use in swimming pools. Direct exposure to excessively soft, alkaline or acid water conditions can shorten service life. Water base anti-corrosive top coatings can afford additional protection in such environments. Not intended as a surface coating. Will not provide prolonged waterproofing in unstable cracks or holes. Never use to fill expansion or control joints; joints of this nature are designed to permit movement. Contact Southwestern Petroleum Corporation for information concerning other uses.

COVERAGE RATES: One pound will fill 17 cubic inches which is equivalent to 30 inches of 3/4 inch by 3/4 inch cracks. (One kg will fill 618 cm³ which is equivalent to 169 cm of 1.9 cm by 1.9 cm cracks.)

CURING: Initial set occurs within three minutes. Final set occurs within five minutes.

CLEAN-UP: Clean tools with water before material hardens.

STORAGE: Unopened containers of SWEPCO HydraPlug have a shelf life of one year provided they are stored in a dry location and protected from temperature extremes.

ADDITIONAL INFORMATION: For more information 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 No. 3, B-2390 Oostmalle, Belgium.

SAFETY PRECAUTIONS: Avoid contact with eyes. Avoid prolonged or repeated full strength contact with skin. Do not take internally. 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. Ingestion can cause impairment of digestive functions; 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 thoroughly with soap and water after wiping off excess material. If irritation persists, seek medical attention. Ingestion - Do NOT induce vomiting. If vomiting occurs, keep head below hips to prevent aspiration. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

For further health and safety information, consult Material Safety Data Sheet (MSDS) for this product or, in an EMERGENCY, call 1-800-424-9300, 24 hours per day.

HYDRAPLUG WATERPROOFING CEMENT

DESCRIPTION AND PURPOSE:

SWEPCO HydraPlug is a fast setting hydraulic cement used primarily to stop running water leaks through static holes and cracks in all types of above or below grade concrete and masonry construction. It is ideal for use on subgrade walls, tunnels, pipes, conduits, cisterns and tanks. Also suitable for use in applications where a rapid set cement with exceptional strength is desired, such as setting posts, bolts and railings or repair of damaged surfaces which cannot be taken out of service for longer periods of time.

OUTSTANDING FEATURES:

STOPS ACTIVE WATER LEAKS INSTANTLY

SWEPCO HydraPlug's advanced formulation allows it to stop the toughest leaking situations. Even where water is actually running, HydraPlug works and works fast.

EASY TO USE

Just mix with water, mold into a plug for holes or a rope shape for cracks and force into the opening and hold.

HARDENS IN THREE MINUTES, EXPANDS AS IT SETS

After three minutes the leak is gone. HydraPlug expands as it cures so water can't force it out once it has set.

STRONGER THAN COMPETITIVE PRODUCTS

HydraPlug is twice as strong as high quality concrete and up to

70% stronger than competitive hydraulic cements.

With a compressive strength of more than 8,150 PSI, you can be sure HydraPlug will provide a long lasting solution to masonry leaks.

VERSATILE

SWEPCO HydraPlug is very versatile. It is suitable for both above and below grade use, either indoors or outdoors.

This makes it ideal for repair of basement walls, foundations, tunnels, pipes, conduits, cisterns, tanks . . . literally any type of masonry surface that needs water leaks plugged.

A set time of under three minutes makes HydraPlug the perfect material for setting posts, railings, bolts or other types of fasteners.

Fast set time and extraordinary strength also make it ideal for repairs to concrete flooring and other surfaces which must be put back in service fast.

USE IT WITH SWEPCO HYDRACOAT FOR COMPLETE PROTECTION

SWEPCO HydraPlug is the perfect companion product for SWEPCO HydraCoat. SWEPCO HydraCoat is a waterproofing surface coating for masonry. Plug holes and cracks with HydraPlug and then coat the surface with HydraCoat for total protection. Used together, they meet the world famous British Standard 6920 for applications involving contact with potable water. This makes them the perfect solution for repair and relining of new or old potable water tanks and cisterns.



GENERAL DATA:

TYPICAL PHYSICAL PROPERTIES

| | |
|---|------|
| Specific Gravity, @60°F (15.5°C) (ASTM D-70) | 2.6 |
| Unit Weight (Cured), @60°F (15.5°C), lb/gal (ASTM D-70) | 21.5 |
| Unit Weight (Cured), @60°F (15.5°C), kg/liter (ASTM D-70) | 2.6 |
| Initial Set, @70°F (21.6°C), 50% Humidity, Minutes | 3 |
| Final Set, @70°F (21.6°C), 50% Humidity, Minutes | 5 |
| Pot Life, @70°F (21.6°C), 50% Humidity, Seconds | 90 |
| Color | Gray |

TYPICAL PERFORMANCE PROPERTIES

| | |
|---|--------------------|
| Compression Strength, PSI (N/mm ²), 30 Minutes, (ASTM C109) | 2130 (14.78) |
| Compression Strength, PSI (N/mm ²), 7 Days, (ASTM C109) | 7480 (51.61) |
| Compression Strength, PSI (N/mm ²), 28 Days, (ASTM C109) | 8180 (56.44) |
| Flexural Strength, PSI (N/mm ²), 30 Minutes, (ASTM C348) | 508 (3.51) |
| Flexural Strength, PSI (N/mm ²), 7 Days, (ASTM C348) | 710 (4.90) |
| Flexural Strength, PSI (N/mm ²), 28 Days, (ASTM C348) | 751 (5.18) |
| Tensile Strength, PSI (N/mm ²), 30 Minutes, (ASTM C190) | 250 (1.73) |
| Tensile Strength, PSI (N/mm ²), 7 Days, (ASTM C190) | 290 (2.00) |
| Tensile Strength, PSI (N/mm ²), 28 Days, (ASTM C190) | 351 (2.42) |
| Dimensional Stability | No Shrinkage |
| Accelerated Weathering, 500 Hours | No Surface Defects |
| Storage Stability | One Year |

TYPICAL CHEMICAL PROPERTIES

| | |
|---------------------------|-----|
| Non Volatiles, % wt | 100 |
|---------------------------|-----|

APPLICATION INFORMATION:

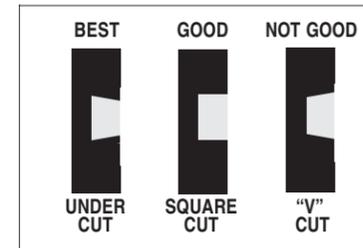


Fig. No. 1: Proper Crack & Hole Preparation



Fig. No. 2: For active water leaks, mix HydraPlug into a heavy putty and form into a plug for holes or a rope shape for cracks.



Fig. No. 3: When HydraPlug begins heating up, force into hole or crack in one swift movement. Keep pressure applied without disturbing for three minutes.

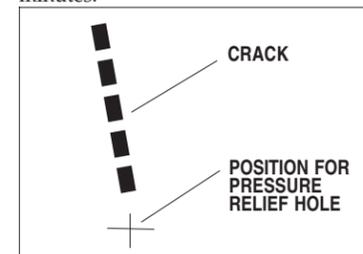


Fig. No. 4: Longer active cracks which cannot be plugged with one plug should be repaired with multiple plugs working from the top down. Before starting divert active water from crack by drilling a pressure relief hole below crack. After the crack is plugged, the hole can be plugged.

IMPORTANT: SWEPCO HydraPlug is a very fast setting hydraulic cement used primarily to stop running water leaks through static holes and cracks in all types of above or below grade concrete and masonry construction, including walls, tunnels, pipes, conduits, cisterns and tanks. It is also suitable for use in other applications where a rapid set cement with exceptional strength is useful, such as setting posts, bolts and railings or repair of damaged surfaces which cannot be taken out of service for the period of time it takes slower setting patching materials to cure.

PREPARATION: Because HydraPlug has an initial set time in normal temperatures of three minutes or less, all surface preparation must be accomplished before mixing of the product. The prepared surface must be clean, rough and sound to insure satisfactory performance. Oil, dirt, debris, surface contaminants, paint or unsound masonry must be removed. Most holes and cracks can be adequately prepared by chiseling away enough material to expose a new, solid surface. Holes and cracks should be a minimum of 3/4 inch (1.9 cm) wide and deep. If smaller, the hole or crack should be enlarged with a masonry chisel or star drill. Best performance is obtained if the sides of the hole or crack are chiseled with a slight undercut. "Undercutting" means creating a slight taper which makes the width at the surface of the crack or hole slightly narrower than the width at the rear. Square cuts are acceptable if undercutting is not possible. A "V" shaped taper where the width of the surface opening is wider than the width at the rear of the hole or crack should not be used. (See Fig. No. 1.)

IMPORTANT TEMPERATURE CONSIDERATIONS: HydraPlug pot life and setting times are temperature sensitive. The most workable temperature range for ambient temperatures, surface temperatures and temperatures of materials and tools is 70-80°F (21-27°C).

Hot Weather: Use of HydraPlug is not recommended when materials are above 80°F (27°C) or ambient temperatures or surfaces are above 100°F (38°C). Use of cold mixing water and cooler mortar and tools can help lengthen working time in temperatures between 80 and 100°F (27-38°C).

Cold Weather: Use of HydraPlug is not recommended when ambient temperatures or surfaces are below 40°F (4°C) or are expected to fall below 40°F (4°C) within 12 hours of placement. In cold weather applications at 40°F (4°C) or

above, materials should be brought to 70°F (21°C) before mixing and placement by storing in a temperature controlled environment.

MIXING: HydraPlug is prepared for placement by mixing the dry mortar mix into clean potable water in a clean container. The normal mix ratio is approximately four parts mortar to one part water. Add powder to water, mixing rapidly by hand or trowel for no longer than 30-60 seconds until a putty consistency is formed. Mix only as much material as can be mixed and placed within three minutes or less. Do not try to retemper a mixture which has begun to set by adding more water.

PLACEMENT: The basic technique for use of HydraPlug in active water leak situations is to mold the mixed mortar into a plug shaped mass slightly larger than the shape and size of the hole or crack being repaired. (See Fig. No. 2.) Place plug in palm of hand or on trowel. When plug begins developing heat, force plug straight into hole or crack in one quick movement. Keep pressure applied for a minimum of three to five minutes to insure initial set. (See Fig. No. 3.) When pressure is removed, shave excess of plug flush with surface with a wet trowel. Keep patch moist for a minimum of 15 minutes. In applications where no active water is present, placement time can be extended briefly by placing the mortar as soon as it is mixed instead of waiting for heat to develop. In addition, application of pressure to the repair is not necessary when active water is not present. The following are recommendations for dealing with some of the more common uses:

For Running Water Leaks Through Cracks Longer Than 4 Inches (10 CM) -- Because longer cracks with running water leaks can be more difficult to seal than holes and short cracks, it is always preferable to reduce or eliminate the active water leak by creating a pressure relief hole below the crack being repaired. The crack is then sealed by using several rope shaped plugs, working from top to bottom of the crack. As a last step, the pressure relief hole is plugged. (See Fig. No. 4.)

For Sealing Joints Between Walls & Floors -- Be sure joint is clean and a minimum of 3/4 inches (1.9 cm) wide and deep. Mixed HydraPlug should then be forced into the joint and finished off with a mason's cove tool.