



## SPALL REPAIR

607-1.1 DESCRIPTION. This item shall consist of furnishing and installing suitable material to repair damaged concrete pavement. Spall repair shall consist of sawing concrete behind the spalled area, removing concrete pavement to expose sound pavement throughout the repair area, preparing and installing repair material and completion of the sawn joint.

607-1.2 IDENTIFICATION. Prior to commencing with spall repair work on the concrete pavement, the Contractor in the company of the Owner shall inspect the concrete to identify spalls and mark any areas that shall be prepared. Identification of spalls shall be at the sole discretion of the Owner.

## MATERIALS

607-2.1 ELASTOMERIC CONCRETE. The elastomeric concrete shall contain a two-component polyurethane product mix with sand and 1/8" chopped strand fiberglass. The elastomeric concrete shall contain no greater than 21 pounds of sand and fiberglass for every gallon of polymer. The elastomeric concrete will consist of a fluid base or binder with suitable reinforcing agents to provide a product that mixes in five minutes or less, flows readily, strongly adheres to concrete, requires no external application of heat for curing and cures within a maximum of two hours after mixing. This material shall be Delpatch™ as manufactured by the D.S. Brown Company, 419-257-3561, fax 419-257-2200 or pre-approved equal.

607-2.2 PROPERTIES. The material shall meet the following properties:

Properties	Requirement	Test Method
Tensile		
Strength	600 psi	
Elongation	25	
Hardness, Durometer D	50	ASTM 2240



Compressive		
Stress psi		
5% Deflection	800min/1400max	ASTM D 695
Resilience, %		
5% Deflection	95 min	
Impact		
Ball Drop @ -20F (No cracking)	>10 ft	
Adhesion to Concrete (psi)		
Dry Bond	400 min	
Wet Bond	250 min	
Fluid Immersion		
% Wt, change after 70 hrs in room temp. Jet fuel	8% max	ASTM D 471

## **CONSTRUCTION METHODS**

607-3.1 WEATHER LIMITATIONS. Spall repair shall be performed only when the ambient air temperature is 45°F (7°C) and rising. The temperature of the concrete to be repaired shall be 45°F (7°C) or above.

### 607-3.2 PREPARATION AND APPLICATION OF ELASTOMERIC CONCRETE.

1. Area Preparation - Saw cut area to be repaired to the dimensions indicated in the plans or as directed by the owner. Carefully sandblast all areas, which will be in contact with the elastomeric concrete material. Repair area must be clean and dry before placing elastomeric concrete.
  
2. Priming - Use a pump sprayer or brush to apply the primer. The primer shall be supplied as part of the elastomeric concrete system, product # 105 or pre approved equal. Apply primer for concrete surfaces to all areas, which come in contact with the Elastomeric concrete. Allow primer to dry 30 minutes before pouring the spall repair material.



3. Mixing - Mix 3,000 ml of Part A and 1,500 ml of Part B for approximately 10 seconds. Add one pre-weighed and portioned bag of sand and fiberglass (provided by the manufacturer) and continue to mix for approximately 1 minute. When properly mixed, the elastomeric concrete is an even gray color.

4. Pouring - Fill entire area to grade as you go. The elastomeric concrete is self-leveling. As it cures, use a trowel to achieve a grooved or textured finish. Masking and forming materials, which were used, should be removed immediately after troweling.

Large patches requiring multiple mixes may require special procedures. This practice is common with joint and spall repair projects. Although it is always better to build the placement of material to grade as you go, layering of material may be necessary for large patches. When layering elastomeric material, it is required that existing layers be poured over with freshly mixed material within 8 minutes of initial pour.

5. Accepting Traffic – Allow the material to cure two hours before opening to traffic.

**607-3.3 MANUFACTURERS REPRESENTATIVE.** A representative or agent of the manufacturer shall be present during the initial uses of this product to satisfy himself/herself and the Owner that it is being properly applied.