



**SECTION 523 — JOINT SEALING OF PORTLAND
CEMENT CONCRETE PAVEMENTS**

523.01 DESCRIPTION. This work shall consist of cleaning and sealing portland cement concrete pavement joints as specified in the Contract Documents or as directed by the Engineer.

523.02 MATERIALS.

Joint Sealers	911.01
Preformed Joint Fillers	911.02

Backer Rod. Backer rod used with joint sealer shall be flexible, compressible, nonshrinkable, have a surface that will prohibit bond with the joint sealer, and be capable of uniformly containing the joint sealer within the desired shape factor. Hard rubber and materials that deform at sealer application temperatures or swell when wet are prohibited.

523.03 CONSTRUCTION. Joints shall be sealed the same day they are shaped and prepared, and shall be completed prior to opening the roadway to traffic, unless otherwise directed by the Engineer. Joints not sealed the same working day shall be re-cleaned and dried as specified in 523.03.02.

523.03.01 Joint Construction. Joint construction shall be as specified in 520.03.14. When the joint is tooled, preformed joint fillers are prohibited.

523.03.02 Joint Preparation. Joints shall be cleaned by one of the following methods as approved by the Engineer:

- (a) High pressure water blasting.
- (b) Abrasive blasting.
- (c) Oil free air blowing at a minimum of 90 psi.

All joint walls and surfaces to which the joint material is to adhere shall be dry prior to installing the joint filler.

All prepared joints will be inspected and approved by the Engineer prior to sealing.

523.03.03 Sealing. Preformed joint filler shall be installed in conformance with the manufacturer's recommendations and the Contract Documents. The Contractor shall insert the backer rod as specified in the Contract Documents.

Silicone sealer shall be installed in conformance with the manufacturer's recommendations.

Backer rods are not required in longitudinal joints.

The ambient air and pavement temperatures shall both be a minimum of 45 F and rising at the time of sealer application.

Sealer that is hot applied shall be heated as specified in the manufacturer's recommendations in a kettle or other equipment acceptable to the Engineer. The kettle shall have a mechanically operated agitator, recirculation pumps, and a positive thermostatic temperature control. The applicator wand and all connecting hoses shall be insulated. Overheating or direct heating of the sealer is prohibited.

Sealer that has been overheated, subjected to heating for more than four hours, or any amount that remains in the applicator wand at the end of the day's operation shall be withdrawn and disposed of. Prior to the start of each day's operation, the Contractor shall withdraw and dispose of a minimum of 1 gal of sealer drawn from the container through the applicator wand.

All joints shall be filled with sufficient material that will result in the final surface of the sealer being recessed 1/4 in. below the surface of the pavement. Any joint with the sealer recessed more than 5/16 in. below the surface of the pavement two hours after sealing shall be resealed.

Silicone sealer shall be tooled so that the final surface of the sealer will have a parabolic shape in the surface cross sectional area. The deepest point at the center of the joint shall be 5/16 in. below the pavement surface. The Contractor shall use a tool approved by the Engineer that is capable of obtaining the parabolic shape at the surface of the sealer.

Curing time for silicone material varies with temperature and humidity and therefore may delay opening the pavement to traffic. The Contractor is advised to consult the manufacturer's recommendations for curing time.

The Contractor shall remove any excess sealer from the surface of the pavement.

All traffic shall be kept off the pavement surface until the sealer has cured.

Any sealer that pulls loose from the joints or shows excessive bubbling within one week after opening the pavement to traffic shall be replaced by the Contractor at no additional cost to the Administration.

523.04 MEASUREMENT AND PAYMENT. Joint Sealing of Portland Cement Concrete Pavement will be measured and paid for at the Contract unit price per linear foot of joint unless otherwise specified in the Contract Documents. The payment will be full compensation for cleaning existing joints, furnishing, hauling, placing all materials including preformed joint filler, joint sealer, backer rod, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

Joint construction and sealing will not be measured but the cost will be incidental to the Contract unit price for the pertinent Portland Cement Concrete Pavement item.