

**Designer Note- Utilize this specification for grooving contrast preformed thermoplastic for long line and special markings.**

## **Pavement Marking Contrast Grooved Preformed Thermoplastic 4-Inch, Item SPV.0090.01; 8-Inch, Item SPV.0090.02**

### **A Description**

This special provision describes grooving the pavement surface, and furnishing and installing contrast preformed thermoplastic pavement marking as shown on the plans, in accordance with section 646 of the standards specifications, and as hereinafter provided.

### **B Materials**

Furnish 125 mils contrast preformed thermoplastic pavement marking from the department's approved products list. If required, furnish sealant material recommended by the manufacturer.

### **C Construction**

#### **C.1 General**

For quality assurance, provide the project engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of preformed thermoplastic pavement marking.

Plane the grooved lines in accordance with the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

#### **C.2 Groove Depth**

Cut the groove to a depth of 120 mils  $\pm$ 10 mils deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

#### **C.3 Groove Width – Linear Markings**

Cut the groove 1-inch wider than the width of the thermoplastic.

#### **C.4 Groove Position**

Position the groove edge in accordance with the plan details.

##### **C.4.1 Linear Marking**

Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

### **C Construction**

#### **C.1 General**

For quality assurance, provide the project engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking tape.

Plane the grooved lines in accordance with details in the plan. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

### **C.2 Groove Depth**

Cut the groove to a depth of 120 mils  $\pm$ 10 mils from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

### **C.3 Groove Width – Longitudinal Markings**

Cut the groove one-inch wider than the width of the tape.

### **C.4 Groove Position**

Position the groove edge in accordance with plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

### **C.5 Groove Cleaning**

#### **C.5.1 Concrete**

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the adhesive, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft<sup>3</sup>/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

#### **C.5.2 New Asphalt**

If opening to traffic an asphalt lane that is not grooved, place temporary pavement marking. For asphalt lanes not open to traffic, temporary pavement marking is not required.

Use a high-pressure air blower with at least 185 ft<sup>3</sup>/min air flow and 90 psi air pressure to clean the groove.

#### **C.5.3 Existing Asphalt**

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft<sup>3</sup>/min air flow and 90 psi air pressure to clean the groove.

### **C.6 Preformed Thermoplastic Application**

Preheat the surface if necessary based on manufacturer's recommendation.

Apply contrast preformed thermoplastic in the groove as per manufacturer's recommendations. If manufacturer's recommendations require a sealant, apply a sealant lower than 91g/l VOC during the following period of time due to Volatile Organic Compound Limitations:

May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee.

Use any sealant in the remainder counties and for the remainder of the year. The sealant must be wet.

### **D Measurement**

The department will measure Pavement Marking Grooved Preformed Thermoplastic by the unit, acceptably placed, or in length by the linear foot of tape placed in accordance with the contract and accepted.

### **E Payment**

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION				UNIT
SPV.0090.01	Pavement Marking	Contrast	Grooved	Preformed	LF
SPV.0090.02	Thermoplastic 4-Inch				LF
	Pavement Marking	Contrast	Grooved	Preformed	
	Thermoplastic 8-Inch				

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; furnishing, placing, and removing temporary pavement marking, if necessary; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

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