



# **Round Road Markers Installation Instructions**

## **Pavement Surface Preparation & Application Procedure**

**Installation Instructions  
January 2022**

**Table of contents**

**Pavement Surface Preparation**

Description	Page 3
Application guidelines	Page 3
Surface types	Page 4

**Adhesive Requirements**

Nails or screw anchor requirements	Page 5
Epoxy requirements	Page 5
Bitumen adhesive requirements	Page 6

<b>Health and Safety Information</b>	Page 6
--------------------------------------	--------

## Pavement Surface Preparation

### Description

This document contains pavement surface preparation and application procedures for Hersan USA™ Round Road Markers. For situations not specifically covered in this document, it is the responsibility of the installer to contact the appropriate Hersan USA™ technical service representative for guidance. Instructions contained in this document must be followed for proper application and performance.

### Application Guidelines

Round Road Markers are designed for application to properly prepared asphalt or Portland cement concrete surfaces using recommended nails, anchor wedges or two-part epoxy or bitumen adhesives. Adhesives other than those recommended must be evaluated by the user to determine suitability.

Follow the recommendations of the adhesive manufacturer for application temperatures and ambient weather requirements.

All Applications must be made on a dry surface that has been swept clean or blown with high-pressure air to remove dirt and dust.

**NOTE:** DO NOT apply markers in the following situations:

- During rainfall or within 24 hours after rainfall
- Over existing pavement markings such as paint, thermoplastic, or preformed tapes
- On transverse or longitudinal seams or joints in the pavement
- On pavement surfaces with cracking, spalling, or failure of underlying base material
- Closer than 2 inches (50 mm) to a pavement construction (transverse or longitudinal) joint or within an intersection

If the initial location of a round road marker is determined to violate one of the conditions, relocate the affected marker longitudinally. Relocate the marker within a distance not exceeding 10 percent of the specified marker spacing.

## Surface Types

- **Chip, Slurry or Fog Sealed Surfaces**

Allow adequate compaction and curing time before application of markers. Chip seal surfaces should be swept of excess aggregate and open to traffic for 30 days prior to installation of markers. Follow the recommendations of the adhesive manufacturer for these surfaces. On coarse textured chip seal pavements, epoxy adhesive may need to be placed in two steps to allow for proper leveling prior to marker application.

- **New Portland Cement Concrete Surfaces**

Concrete surfaces open to traffic for less than 90 days must have the curing compound removed prior to application of bitumen or epoxy. Curing compound should be removed by sandblasting or other methods such as hydroblasting, shot blasting or grinding.

- **Old Portland Cement Concrete Surfaces**

Markers can be applied directly to concrete surfaces that have been open to traffic for at least 90 days.

- **New Asphalt Surfaces**

Review the manufacturer's recommendations for applying bitumen adhesives to asphalt surfaces to determine required waiting periods between paving operations and marker installation. The use of epoxy adhesives on asphalt surfaces open to traffic less than six months should be tested and approved by the user for adhesion performance before large-scale applications are made.

## Application Procedure

### Nails / Screw Anchor

High-strength screw anchor or nail for concrete and asphalt should display the following characteristics:

Qualified for static and seismic loading conditions

No special drill bit required, designed to install using standard-sized ANSI tolerance drill bits

Hex-washer head requires no separate washer and provides a clean installed appearance

Zinc-plated carbon steel anchor can be used

### Application guidelines

Once the space where the part will be installed has been selected, do the steps below:

- I. Place the piece oriented in the direction of the driver on the road,
- II. Drill with 1/4" x 5" concrete / asphalt drill bit,
- III. Positioning the piece and 1/4" x 3" nails / screw anchor over the holes,
- IV. Using a hammer, drive the nails / screw anchor up to the edge of the piece.

### Epoxy requirements

A properly mixed epoxy adhesive should display the following characteristics of the combined components:

Gel Time: 7 to 13 minutes

Bond Strength to Concrete: Time to reach not less than 200 psi at 77°F  
(14 kgs/cm<sup>2</sup> at 25°C)  
180 minutes (3 hours)

Shear Strength:	24 hrs. @ 77°F (25°C)
	2200 psi (154 kgs/cm <sup>2</sup> )
	24 hrs. @ 77°F (25°C) plus water soak
	1500 psi (105 kgs/cm <sup>2</sup> )

Sufficient pressure and adhesive must be used to assure a visible bead of adhesive around the perimeter of the marker. Excessive epoxy in front of the reflector surface should be scraped aside.

### **Application guidelines**

Epoxy Adhesive is a high-strength anchoring adhesive, is a 1:1 ratio, two-component anchoring adhesive for install Round Road Markers.

- I. Mix the components 1:1 (part A and part B) until a homogeneous color mixture is obtained. otherwise the result will be altered; it is recommended to always add part B catalyst to part A resin. part B catalyst to part A resin.
- II. The pavement must be clean and dry, free of dust, oils, grease and any other loose material.
- III. Apply a sample on the buttons covering all the lower surface.
- IV. Apply a small pressure on the button once it is on the pavement, verifying that it protrudes, especially in the corners.
- V. To allow the adhesive to cure, wait approximately 45 to 60 min, depending on the temperature of the environment before resuming vehicular traffic.
- VI. To prolong the life of the mixture once prepared, it is recommended to keep it in the coolest place possible.
- VII. Normally the yield is 100 grams per button.

Follow the manufacturer's recommendations for application.

### **Bitumen Adhesive requirements**

Bitumen adhesive is a homogeneous mixture of asphalt binder and mineral filler. It is a single-part system designed to be melted, then applied by pouring or pumping. Bitumen adhesive sets up on cooling and is ready for traffic within five minutes.

### **Application guidelines**

The bituminous adhesive for Round Road Markers is applied by melting the material in a boiler (Hot Melt) and once at the recommended temperature, it is poured on the surface to glue the vial and hardens at room temperature.

Follow the manufacturer's recommendations for application.

### **Health and Safety Information**

Read all health hazard, precautionary and first-aid statements found in the Material Safety Data Sheet (MSDS) and/or product label of chemicals prior to handling or use. Also refer to the MSDS for information about the volatile organic compound (VOC) content of chemical products.

Consult local regulations and authorities for possible restrictions on product VOC content and/or VOC emission.