

SpikeFast® ES-50 RM/RM II

Wood Tie Plugging Material

Description

SpikeFast® ES-50 RM is specifically designed to remediate wood railroad ties. This non-foaming, 100%-solids polyurethane is designed to anchor spikes with comparable strength to that of un-spiked hardwood ties. SpikeFast® ES-50 RM is dispensed from equipment engineered for efficient metering/mixing, pressure and temperature control. SpikeFast® ES-50 RM can be applied in a wide range of outdoor conditions.

Applications

- Wood cross ties spike holes – re-spike filled holes
- Tie remediation – bonds tightly to wood & seals out water
- Tie defects – penetrates cracks, voids, crevices

Features/Benefits

- Quick cure time – high production rates
- Dynamic rail rollover – equal to hardwood, 2X wood plugs
- Lateral resistance – 20% greater than hardwood ties
- Easy to apply – minimal maintenance and clean up



Typical Properties

Description	Result	Method
VOC	0 lbs/gal (g/L)	ASTM D2369
Viscosity ES 50 RM	200/4700 cps, Iso / Resin, 77°F (25°C),	ASTM D4878
Viscosity ES 50 RM II	200/2400 cps, Iso / Resin, 77°F (25°C),	ASTM D4878
Hardness	80 Shore D	ASTM D 2240
Approximate set time	30 seconds - containers 50 seconds - cartridges (temperature dependent)	77°F (25°C)
Service temperature	-40 to 180° F (-40 to 82°C)	-

Processing Parameters	
Volume ratio	2:1 resin:iso
Meter equipment	Plural component
Static mixer	13 mm diameter 32 mix element
Typical spike hole application volume	1.6 in ³ (26 cm ³)

■ Packaging

200 gallon totes (758 L)
50 gallon drums (190 L)
5 gallon buckets (19 L)
15 oz. cartridges (450 ml) *ES-50 RM only*

■ Color

Yellow

■ Yield*

150 spike holes per gallon
38 spike holes per liter
**Assumes 0.63 x 0.63 x 4.5 in (1.6 x 1.6 x 11.4 cm) spike-hole dimension*

■ Shelf Life

Containers: 6 months when properly stored.
Cartridges: 18 months when properly stored.

■ Storage

Containers: Store in original container and sealed until ready for use. Reseal used containers and store in an upright position. Store in a clean, dry, low-humidity, and shaded or covered environment between 50 to 90° F (10 to 32° C).

Cartridges: Store and ship this product in a clean, dry, low-humidity, and shaded or covered environment between 50 to 90° F (10 to 32° C).

■ Application

SpikeFast® is supplied in a ready-to-use form that requires proper mixing and dispensing. Care should be taken that SpikeFast® is stored properly, does not become contaminated with foreign matter and is applied according to WVCO recommendations.

Meter Dispensed

Processing

For meter applied applications contact the Willamette Valley Company Performance Products Division for equipment recommendations. WVCO's metering equipment is specifically engineered for processing SpikeFast® to generate the proper mix ratio, pressure and temperature.

1. Test the meter operation before dispensing into spike-hole/tie defect.
2. Place mix-tube on nozzle and tighten retaining nut over the mix-tube. Use a 13 mm diameter mixer with 32 elements.
3. Dispense in test container to verify SpikeFast® material sets up uniformly in less than 1 minute.

Application

1. Dispense SpikeFast® into the spike-hole/tie defect.
2. Fill spike-hole/tie defect from the bottom up. Avoid over filling.
3. Top off spike-hole/defect as necessary if material sinks out.
4. Flush mix-tube as necessary if dispensing stops. Dispense mix-tube flush outside the spike-hole/tie defect when resuming tie remediation.
5. Material may solidify in the mix-tube if application stops for more than 10-15 seconds. Remove spent mix-tube and replace with a new mix-tube as necessary.
6. Periodically inspect applied material to ensure the material is solidifying and uniform. If material is non-uniform, stop, change mix tube and check meter operation for compliance.

NOTE: Material will set in approximately 30 seconds at 77°F. Colder temperatures will slow the set. Warmer temperatures will speed the set.

Contact a Willamette Valley Company representative for more information on product and equipment instructions, recommendations and full-service warranty

■ Health & Safety

Before handling, you should become familiar with Safety Data Sheet regarding the risks and safe use of this product. To obtain an SDS please email wvcorailroadsolutions@wilvaco.com

■ Disclaimer of Warranty

Test results are to be considered as representative of current production and should not be treated as specifications. While all the information presented in this document is believed to be reliable and to represent the best available data on these products, no guarantee, warranty, or representation is made, intended, or implied as to the correctness or sufficiency of any information, or as to the suitability of any chemical compounds for any particular use, or that any chemical compounds or use thereof are not subject to a claim by a third party for infringement of any patent or other intellectual property right. Each user should conduct a sufficient investigation to establish the suitability of any product for its intended use. Proper application is the responsibility of the user. As with any product, the use of this product in a given application must be tested (including but not limited to field testing) in advance by the user to determine suitability. Testing is the requirement of both engineers and contractors alike. WVCO does not warrant the application under any or all circumstances.

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