

Technical Data Sheet



Willamette Valley Company

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Partnering through service,
innovation, and integrity



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SPIKEFAST® ES-50 RM

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. ES-50-RM can be applied in a wide range of outdoor conditions.

WHERE TO USE

- **Wood crosstie spike holes**—re-spike filled holes
- **Tie remediation**—bonds tightly to wood & seals out water
- **Tie defects**—penetrates cracks, voids, crevices

FEATURES AND BENEFITS

- **Quick Cure Time**—high production rate
- **Dynamic Rail Roll-Over**—equal to hardwood, 2X wood plugs
- **Lateral Resistance**—20% greater than hardwood ties
- **Easy to Apply**—minimal maintenance and clean up

PACKAGING

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

COLOR

Yellow

APPROXIMATE YIELD*

150 spike holes per gallon

38 spike holes per liter

15-18 spike holes per cartridge

*Assumes 0.63 x 0.63 x 4.5-in (1.6 x 1.6 x 11.4-cm)
spike-hole dimension.

SHELF LIFE

6 months in containers and 12 months for cartridges
when properly stored.

STORAGE

Store in original container and sealed until ready for use.
Reseal used containers and store in an upright position.

TECHNICAL INFORMATION

Typical Properties

VOC , lbs/gal (g/L), ASTM D 2369	0
Viscosity , cps, ASTM D 4878, 77°F (25°C), Iso / Resin	200 / 4700
Hardness , Shore D, ASTM D 2240	80
Approximate set time , sec, 77°F (25°C)	30 seconds - Containers 50 seconds - Cartridges (Temperature dependent)
Service temperature , ° F (° C)	-40 to 180 (40 to 82)

Process Parameters

Ratio by volume , (Resin : Iso)	2 : 1
Meter equipment	Plural component
Static mixer	13-32
Typical spike hole application volume	1.6 in ³ (26 cm ³)

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 Willamette Valley Company Precision Technologies Division for equipment recommendations. Willamette Valley Company'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.

CARTRIDGE DISPENSED

PROCESSING

1. For colder conditions it is recommended to put the product in a warm area at approximately 70°F (21°C) for 24-hours before using. This will enhance the flow and cure time.
2. Use a 13-mm diameter with 32-element static mix tube.

CARTRIDGE APPLICATION

1. Use a 2:1 (resin:iso) hand applied dispenser and ensure that the dispenser is the proper size and type. Manual, cordless, and pneumatic applicator guns all work adequately. Pneumatic and cordless applicators will provide the most consistent results.
2. Keep the cartridge upright during assembly.
3. Remove the retaining nut and caps from the cartridge.
4. Place mix-tube on cartridge nozzle and hand tighten the retaining nut over the mix-tube.
5. Check alignment of plungers inside cartridge; level if necessary.
6. Keep cartridge upright and load into applicator gun.
7. While pointing cartridge upright, trigger handle to remove any air trapped in cartridges.
8. Point cartridge over waste container and dispense initial amount of material (20-40mL).
9. Fill spike hole/tie defect from the bottom up. Avoid over filling.
10. Top off spike-hole/defect as necessary if material sinks out.
11. Material may solidify in the mix-tube if application stops for more than 20-30-seconds. Remove spent mix-tube and replace with a new tube to finish cartridge.

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

HEALTH AND SAFETY

Before handling, you should become familiar with the Material Safety Data Sheet (MSDS) regarding the risks and safe use of this product. To obtain an MSDS please call 800 333 9826 or send an email to: msds@wilvaco.com.

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