LRT – Elastomeric Rail Grout
Type 1

Description

LRT is a two component elastomeric rail grout formulated with high quality, flexible, 100% solids, Polyurethane. This product system is specifically designed for use in rail applications to fill the space between rail and the adjacent concrete. The LRT provides maximum electrical rail isolation while absorbing sonic and vibration without cracking. LRT is designed to be mixed with gravel, and pump applied with a metering machine to maintain proper A to B ratio.

Advantages

- Quick Set and Cure
- Adjustable *Set Times*
- Electrical Isolation
- Vertical Memory & Stiffness
- Acoustic Noise Reduction
- Very Adhesive
- Chemical resistant
- No VOC's

USES AND AREAS

- Rail Voids & Annular Space to adjacent structure
- Rail Maintenance & Special Void Support
- Rail Intersections & Stations
- Applications Over Subgrade Structures, Tunnels, Vaults and Equipment Parking and Storage Areas.

Preparation: This product is placed over concrete that is 28 days old and with low moisture vapor drive and dry less than 3lbs/24 hrs/1000ft.^{2} or per ASTM E 1907. Moist concrete section should be mechanically dried prior to application.

Prepare concrete to provide rough clean profile minimum 2 to 3 mils. Saw cut damaged areas to provide a perimeter for filling. Review ASTM D4259 Abrading Concrete and ASTM F1869 Measuring Moisture Vapor Emission. Clean and prepare all bug-holes, cracks and spalls. Plug voids, gaps, etc. as needed for filling. Clean and Honor all required joints.

Steel & Concrete: Remove contaminants, salts, old product/material and clean and grind steel damaged edges.

Primer LRT-P: Prime all steel and concrete surfaces using LRT-Primer, single component moisture cure urethane primer. Use prime at a rate of 2 to 3 mils over steel and 3 to 5 mils over concrete. Allow primer to set and become tack free. As soon as primer is (or becoming) tack free apply the LRT Grout.

Northwest Rubber Extruders, Inc.
11155 SW Denny Road, Beaverton, OR 97008
Phone: 503-643-6878 Fax: 503-641-3787

Gravel Filler: Use pre-approved 3/8" round gravel, washed and kiln dried, no dust. Gravel volume makes up 40% to 50% of the void fill volume. An estimate of 30 lbs of approved gravel to each gallon of mixed product.

Product Application Processing: Use approved plural component equipment specifically designed for this product application rate of 4 parts B (resin) to 1 part A (ISO). This processing rate is by volume.
Do not change mix ratio or use equipment that is not approved for this material use.
Precondition Gravel and the part A and B of the product to 70°F for a minimum of 24 hours. Cool conditions, below 50°F – warm products and gravel to suitable temperatures of approximately 100°F before using.

Mixing Part B: After preconditioning the product Mix the part B resin. Mechanically mix the LRT resin using a mixing unit suitable for the size of the container. Mix the resin with enough speed to vigorously move and blend the product to a uniform color appearance. Approximate time to mix – 20 to 30 minutes or until the product is visibly blended for use.

Static Mixer: Use ½" x 32 element or ½" x 36 element mixers. Do not use mixers that are less than ½" in diameter and not less than 32 elements or short mixers of any kind.

Testing: Always perform a test using the approved equipment, product, gravel and static mixer. Time the product and check the penetration into the gravel before making an application. Provide the test results to the project engineer as needed. Do not proceed with the application if product does not meet specs per the test.

Set Times: Set may be adjusted according to project environmental needs. Contac NRE for this data. Product is temperature dependent.

Application: Check forms and sealed sections to assure the area will be ready to receive product without leaks. Application range; 50°F to 100°F and 5°F above dew point.
Once the application begins it should be continuous without stopping to assure proper results. Purge the static mixer of product and discard the mixed product that first exits the static mixer, then move directly into the application and begin dispensing immediately. Stopping the application for more than two minutes will require changing the static mixer. Do not attempt to use a static mixer that has had the product dwell in it for two minutes.
Make sure the primed areas set and ready.
*Various in-place rail equipment may require the applicator or project engineer to create application methods suitable to the conditions. It is the responsibility of the applicator to have any change in procedures or form modifications, changes approved by the project engineer prior to proceeding with the application.

Northwest Rubber Extruders, Inc.
11155 SW Denny Road, Beaverton, OR 97008
Phone: 503-643-6878 Fax: 503-641-3787

Color:

The product is dark gray or black.

Special colors are available upon request.

General Physical Characteristics

Hardness, Shore A, ASTM D 2240	Shore A 85
Solids	100%
Mix Ratio by volume	4:1
Tensile, psi, ASTM D 412	1800
Elongation, ASTM D 412	80%
Adhesion to Steel, psi, STM D 4541	750
Adhesion to Concrete, psi, ASTM D7234	500
Compressive Set, %, STM C 395	<0.5
Compressive Modulus, @250 psi, ASTM C 575	5%
Dielectric Strength, volt/mil, ASTM D 149	>410
Dynamic Deflection, ASTM D 5992	No Failure
Volume Resistivity Extended LRT approved gravel	
Ohm-cm, 75°F 50% RH, ohm-cm, ASTM D 257	$>1.5 \times 10^{12}$
Volume Resistivity Non Extended	
Ohm-cm, 75°F 50% RH, ohm-cm, ASTM D 257	$>1.75 \times 10^{12}$
Color	Dark Gray
Viscosity cps @ 72°F, Mixed	2,000
VOC Content, lbs/gal (gm/L)	0
Gel Time, minutes	7-8
Set Time, minutes	10-12
Tack Free Time, minutes	40-60
Recoat time, minutes & hours maximum	45-24
Service Temperature, °F	-40 to 185

Chemical Resistance – ASTM D 471, 75°F 7 days

Chemical	% Weight Change	% Volume Change
Water	<0.1	<0.1
Salt, 10%	<0.1	0.7
Calcium Chloride 10%	<0.1	0.7
Sulfuric Acid 5%	<0.1	0.5
Sodium Hydroxide 5%	<0.1	1.3
ASTM Oil #1	1.75	2.0
ASTM Oil #3	2.0	2.5
ASTM Fuel A	2.2	1.8

Shelf Life:

1 Year store between 60°F and 90°F.

Packaging:

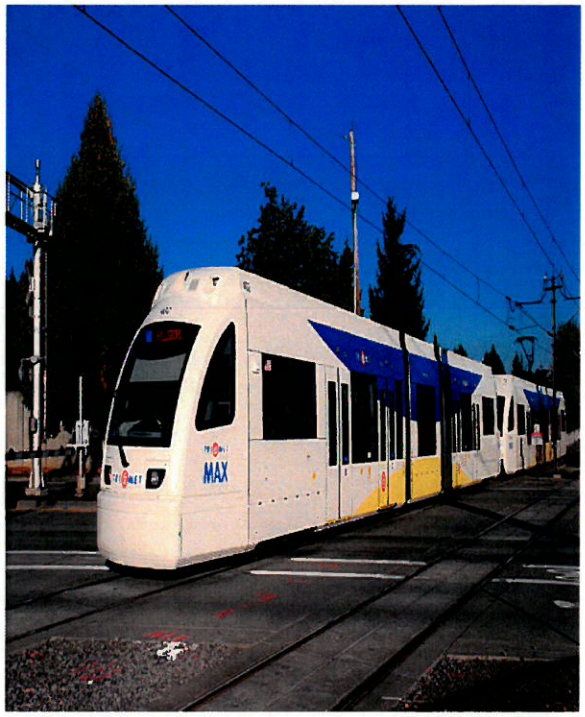
Pre-measured .90 cu. Ft. kits, 25 gal (5 gal kits), 250 gal. Tote tank/ Drum

Shelf Life:

1 Year store between 60°F and 90°F.

Packaging:

Pre-measured .90 cu. Ft. kits, 25 gal (5 gal kits), 250 gal. Tote tank/ Dru



Limitations: Do not use on wet surfaces or expose part A to moisture. Keep out of direct sunlight, store at room temperature. Do not allow the product to stand/dwell in the static mixer. Use at 5 degrees F above dew point. This product is for use by professional applicators only. Wear protective clothing and gloves.. Read MSDS before using this product. DOT/Flash Point Non-flammable Liquid, not regulated. Warranty: See Northwest Rubber data.

Northwest Rubber Extruders, Inc.
11155 SW Denny Road, Beaverton, OR 97008
Phone: 503-643-6878 Fax: 503-641-3787