



A High-Performance Solution

The ballasted track on transit and commuter lines can be sensitive to ground and structure borne vibration. Ballast mat reduces degradation, protects bridge decks and reduces transfer of structure borne vibration.

A study conducted by the Transportation and Technology Center (TTCI) reported that the Ballast Mat can double the life of the ballast. Ballast Mat reduced the Vertical Track Modulus (VTM) by 55 percent in concrete tie track. The impacts at mid-span were reduced by 30 to 40 percent on bridges.

Progress Rail's high-performance Ballast Mats are produced from recycled rubber, resulting in a lower natural frequency compared to traditional ballast mats. This enhances acoustical performance over a wider range of frequencies.

Ballast Mats can be ordered in rolls or sheets to meet various project needs and requirements.

Limits structure-borne vibration, reduces impacts and cuts tamping by 70%.

Benefits

- Reduces degradation of ballast by more than 50%
- Reduces stress on structures
- Provides bridge deck and waterproofing protection
- Reduces maintenance costs
- Provides enhanced acoustical performance
- Buy America compliant

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A Caterpillar Company

+1 800-476-6789 • progressrail.com
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BALLAST MAT SPECIFICATIONS

INFRASTRUCTURE

Progress Rail's Ballast Mats consist of reinforced natural rubber designed to provide reduction of ground or structure borne vibrations, impact on structures and premature ballast degradation. The upper surface of the mat is textured to permit the ballast to nest for trackbed stability, load distribution and is designed to protect against contaminants that may filter through ballast over time. The subsurface contains fabric reinforcement for added strength and the underside is profiled to permit unrestricted subsurface drainage in all directions.

| | TYPE 1 | TYPE 3 | TYPE 4 |
|--------------------|--------|--------|--------|
| CAPACITY | | | |
| Nominal Axle, Tons | 12 | 33 | 40* |

| DIMENSIONS | | | |
|-------------------|----------|----------|----------|
| Width | 48" | 54" | 54" |
| Thickness | 1-3/16" | 7/8" | 3/4" |
| Length | 30' max. | 30' max. | 30' max. |

| STRUCTURE | | | |
|------------------|-------|-------|-------|
| Top Layer | 3/16" | 3/16" | 3/16" |
| Fabric | 1 Ply | 1 Ply | 1 Ply |
| Isolation Layer | 1" | 5/8" | 1/2" |

| WEIGHT | | | |
|--|-----|-----|-----|
| Lbs./sq. yard | ~35 | ~26 | ~23 |
| * Up to 50 MPH. Axle load capacity then reduces for higher speeds. | | | |

| FABRIC | |
|---------------------|-------------------|
| Type | Woven Fiberglass |
| Tensile | 60 lbs./inch min. |
| Elongation at Break | ³10% |

| ELASTOMER | |
|------------------|------------------------|
| Top Surface | Natural rubber and SBR |
| Body (Profiles) | Natural rubber |

PHYSICAL PROPERTIES

| | TYPE 1 | TYPE 3 | TYPE 4 |
|---------------------------|--------|--------|--------|
| Tensile, PSI | 200 | 200 | 200 |
| Elongation At Break | 100% | 100% | 100% |
| Tear Resistance, lbs./in. | 50 | 50 | 50 |

Note: -10% / +open. Values for top layer and do not include fabric.

| | | | |
|--------------------|-------|-------|-------|
| Hardness - Shore A | 53 ±7 | 53 ±7 | 53 ±7 |
|--------------------|-------|-------|-------|

Note: Top layer properties.

DYNAMICS

Dynamic-to-static stiffness ratio (Kd) is 1.4 (+0.1/-free) for Type 1 and 1.86 (+0.1/-free) for Type 3 and Type 4.

Standard quality is suitable for service where B/M temperatures range between (-) 20°C and (+) 70°C.

TEMP RANGE

Standard quality is suitable for service where B/M temperatures range between (-) 20°C and (+) 70°C.

During extreme cold periods, should drains ice and mats become flooded, subsequent freezing will not be damaging. While frozen, of course, performance will be temporarily affected. However, full performance will be restored as soon as ice thaws, drains open and water runs off.

Note: Weights and dimensions are approximate, not exact.

ADDITIONAL RESILIENT PRODUCTS

RESILIENT DF PAD

- Used to provide additional reduction in ground borne vibration
- Available in dual stiffness
- Provides electrical isolation
- Natural rubber

FLOATING SLAB PAD

- Natural rubber pads significantly reduce ground borne vibration and noise
- Side and end pads are available in many sizes and specifications

ELASTOMER PAD

- Designed for complicated track sections to provide reduction in noise and ground borne vibration
- Highly durable and resilient
- Cost and performance effective
- Proven over years in service



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