

Fabreeka®-LTP Crane Rail Pad

CR2-3 and CR17-5



The body of the Fabreeka® CR17-5 Crane Rail pad is composed of multiple layers of prestressed duck impregnated and bound with an oil impervious Butadiene Acrylonitrile elastomeric compound scientifically designed and manufactured. The body of the Fabreeka® CR2-3 Crane Rail pad is a fabric reinforced oil resistant elastomer. Both types of pad can withstand loads of up to 12,000 psi before breakdown.

The LTP surface consists of fabric laminations impregnated with a synthetic phenolic resin vulcanized under heat and pressure.

The LTP surface is integrally molded to the crane rail pad body under scientifically controlled manufacturing procedures.

Applications

Fabreeka® Crane Rail pads are recommended for both indoor and outdoor applications. The pad can be placed directly on the runway steel support girder or sole plate.

Tests performed by independent sources have shown up to 40% reduction in runway beam web stress and noise levels reduced substantially when the Fabreeka® Crane Rail pad was installed.

Fabreeka's® fully-staffed Engineering department is available for consultation to ensure the most efficient type of Crane Rail pad is used.

Typical applications include:

- | | |
|---------------------------|-------------------|
| Bridge Cranes | Dockside Cranes |
| Gantry Cranes | Ore Bridge Cranes |
| Log Handling Cranes | Production Cranes |
| Storage Yard Cranes | Warehouse Cranes |
| Equipment Handling Cranes | |



Features

- ◆ Improves load distribution
- ◆ Damps vibration
- ◆ Eliminates fretting corrosion
- ◆ Relieves girder stress
- ◆ Reduces noise
- ◆ Eliminates wear to rail and girder
- ◆ Reduces rail maintenance
- ◆ Standard lengths to 25' U-Joint used to maintain rail-to-pad contact
- ◆ Two types available to cover all service categories
- ◆ Widths available to suit every rail
- ◆ LTP reinforcement for lateral rigidity and wear resistance
- ◆ Easy installation

Type	Thickness	Service Duty
CR2-3	1/4"	Light to Moderate
CR17-5	11/32"	Heavy to Severe



Case Study

Steel mill location:
 USA (Midwest), Melt Shop
 - Teeming Aisle

Rail:
 175-lb rail with bolted
 (not welded) rail joints

Clips:
 24" on centers

Cranes:
 (2) Alliance ladle

- ◆ 340 ton capacity
- ◆ 8 wheels per side,
 30" dia.

 (2) Cleveland

- ◆ 20 ton capacity
- Span = 75'-0" long

Runway:
 900'-0" long

Fabreeka® type CR17-5:
 6" wide x 11/32" thick x
 full length of both rails

Pad life:
 Pad was installed in 1968
 and was replaced in 1995.

Total life = 27 years

Specification for Fabreeka®-LTP Crane Rail Pads

Rail:

The rail shall be supported on an LTP surfaced Fabric Reinforced Elastomeric Pad (CR2-3) or Preformed Fabric Pad (CR17-5), and secured by adjustable rail clips.

Pad:

The Butadiene Acrylonitrile frictioning elastomer shall be oil resistant (CR2-3) or impervious to oil (CR17-5).

The Fabric Reinforced Pad (CR2-3) shall be manufactured of all new (unused) materials and composed of multiple layers of fabric formed into resilient pads of uniform thickness. The Fabric Reinforced Pad shall withstand compressive loads of not less than 12,000 psi.

The Preformed Fabric Pad (CR17-5) shall be manufactured of all new (unused) materials and composed of multiple layers of prestressed duck, 8.1 ounces per net square yard, duck warp count 50 ± 1 threads per inch and filling count 40 ± 2 threads per inch, 64 plies per inch of finished pad thickness, impregnated and bound with a high quality, elastomeric compound, containing rot and mildew inhibitors and anti-oxidants, compounded into resilient pads of uniform thickness. The Preformed Fabric Pad shall withstand compressive loads perpendicular to the plane of laminations of not less than 12,000 psi before breakdown.

CR2-3 and CR17-5 load deflection properties in accordance with procedures of MIL-C-882, shall be the following maximum percentages of total pad thickness: 15% at 1,000 psi, 25% at 2,000 psi. When loaded to 3,000 psi, permanent set as load is removed in accordance with procedures of MIL-C-882, shall be a maximum of 7% of the original "zero point" thickness. Shore "A" Durometer shall not be less than 90±5 (CR17-5) and 70±5 (CR2-3). The ratio of lateral expansion to vertical deflection shall not exceed 0.25 (CR17-5) or 0.50 (CR2-3) when loaded to 1,500 psi. The material shall not lose effectiveness throughout a temperature range of -40°F to +180°F (CR2-3) or -65°F to +200°F (CR17-5). No visual evidence of damage or deterioration by environmental effects of sunshine, humidity, salt spray, fungus, and dust in accordance with MIL-E-5272.

The LTP surface shall conform to NEMA Grade "C" requirements and vulcanized from an uncured state to the Fabric Reinforced (CR2-3) or Preformed Fabric (CR17-5) Pad.

Static Coefficient of Friction at 1,000 psi		
CR17-5 (bottom surface of pad)	to Carbon Steel	0.40
	to Stainless Steel	0.35
	to Concrete	0.65
CR2-3 (bottom surface of pad)	to Carbon Steel	0.35
	to Stainless Steel	0.35
	to Concrete	0.60
LTP (top surface of pad)	to Rail	0.28

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