

**BASEPLATE CROSSING PANEL
SPECIFICATION RECOMMENDATION**

GENERAL

- A. Railway crossing panels are designed to allow pedestrian, light vehicle and Road Rail Access Vehicle crossing of the track at designated locations.
- B. The following specifies requirements for furnishing crossing panels for use on North American, Central American, and South American Transit Agency systems.
- C. Crossing panels shall be manufactured in accordance with these specifications and as shown on the drawings.
- D. Crossing panels shall have textured top surface to prevent slipping when using the crossing.

TECHNICAL REQUIREMENTS

- A. Crossing panels shall be made from compression molded recycled rubber granules and a polyurethane binder to offer a high degree of dimensional stability in all climate conditions and come with a 10-year guarantee.
- B. Crossing panels shall be black in color. The color shall be uniformly dispersed throughout the panel with minimum variance in color between panels.

MATERIAL TESTING REQUIREMENTS

- A. Pedestrian panel material shall exhibit the following minimum requirements:

Test	Standard	Results
Tensile Strength	BS EN 12230	2.03 MPa
Elongation at break	BS EN 12230	75%
Hardness	BS ISO 48	74 IRHD
Density	BS ISO 2781	1.12 g/cm ³
DIN abrasion resistance	BS ISO 4649	167mm ³ volume loss
Rebound resilience	BS ISO 4662	43%
Slip resistance	BS 7976-2	Wet- 76 Dry- 88
Tear resistance	BS ISO 34-1	13Nmm ⁻¹
Compression Set	BS ISO 815-1	27.4% after 24 hours @ 40°C
Load deflection	11 tonne loading held for 2 minutes	13.21mm deflection

Coefficient of thermal linear expansion	BS ISO 821-1	169.6 x 10 ⁻⁶ °C ⁻¹
AC electrical impedance	Network Rail Standard NR/L2/TRK/4040	Min. 3850Ω (9m of salted and wet panels)
DC electrical impedance	Network Rail Standard NR/L21/TRK/4040	Min. 3733Ω (9m of salted and wet panels)
Residual DC voltage test	Network Rail Standard NR/L2/TRK/4040	Voltage drop to 0.0017V in 1s after 1 week of continuous 10V DC through 9m of wet panels
Resistance to petrol, diesel de-icer, road salt	Samples were treated 3 times at 24 hour intervals with each chemical	No visual or surface change or deterioration was observed with any of the chemicals

MANUFACTURING REQUIREMENTS

- A. Manufacturer shall demonstrate a minimum of 10 years in-track history with crossing panels.
- B. Crossing panels shall be produced by a compression molding process with a cold curing chemical process.
- C. Crossing panels shall conform to the specified dimensions with a minimum length of 70.87 inches and minimum width of 19.00 inches.
- D. Each crossing panel shall be marked in permanent white paint with panel code, date of manufacture, batch number and sequential panel number.
- E. Crossing panels adjacent to running rails shall have flanges that fit inside the web of the rails to ensure consistent fitment along rails.
- F. Each crossing panel shall have two 1.46 inch diameter holes for lifting hooks to assist with installation and shall be installed as pairs inside of the rails.

DRAWINGS

- A. The manufacturer shall, within thirty days of receipt of signed purchase order, submit for approval drawings of the crossing panels. Such drawings shall show all critical dimensions, kind and quantity of materials, specifications and any other information required for engineer's approval. The cost for preparation and submittal of said drawings is to be borne by the vendor.

INSPECTION AND SHIPPING

- A. The vendor shall, at their own expense, provide adequate facilities for the inspection of the crossing panels by a representative of the Authority during the course of manufacturing.
- B. Prior to the acceptance and delivery of the crossing panels, the vendor shall submit for approval two copies of certified test reports from a recognized laboratory that the material to be supplied conforms to these specifications. The cost for testing shall be borne by the manufacturer. Compliance under this section will be justification for acceptance and payment.

- C. Crossing panels shall be carefully prepared for shipment to prevent any damage in transit. Any panel found damaged in shipment will be rejected and shall be removed and replaced by the vendor at their own expense.
- D. The crossing panels shall be palletized and securely bound to prevent movement which may render the load unstable during transit. Panel identification numbers shall remain visible after palletizing.

END OF SECTION