

Ciprotec 6018

Under ballast mat for track systems

Application

Ciprotec is mainly used for ballast tracks on bridge decks, tunnel floors or similar. It helps to avoid ballast wear or protects coatings of concrete or steel structures. The mats fully cover the subfloor. They also provide highly effective reduction of vibrations and sound emissions caused by rail bound traffic. The various types of mats come in thicknesses from min. 10 mm and are designed for different axle loads, speeds and types of permanent way, e.g. not only ballasted tracks but also floating slab tracks or mass-spring systems. Ciprotec guarantees effective attenuation of structure-borne noise and vibration in tunnels underneath buildings, track sections adjacent to buildings and bridges over structures. Ciprotec is suitable for main line railway-, metro-, underground-, light rail- or tram tracks.

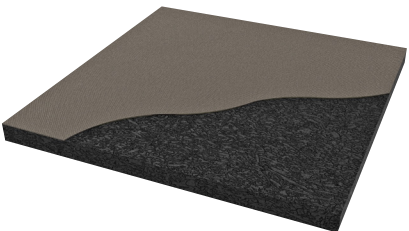
Description

Ciprotec is a black elastic mat made of PU bound rubber fibres, laminated on top with a geotextile layer of robustness class GRK 5. If requested, Ciprotec can also be supplied without geotextile layer. The upper table shows the main properties of the product.

Installation

Ciprotec is layed to a well-swept subfloor. Projecting concrete edges or similar, protruding reinforcement parts etc must be removed. Ciprotec shall be layed butt-jointed without gaps. In case several layers of Ciprotec are installed, the different layers shall be staggered. Longitudinal or transverse joints between single mats facing the ballast bed or a concrete track slab, shall be closed with a suitable covering strip or tape. The same applies to possible corner joints between floor- and side mats. If requested, the mat can also be glued in whole or in part to the surface of the subfloor.

Product data

PRODUCT PROPERTIES			
Item	Test Standard	Values	
Tensile strength	ISO 37	0.40 N/mm ²	
Elongation at break	ISO 37	66 %	
Tear resistance	Ref. to DIN ISO 34-1	4.5 N/mm	
Fire behaviour	DIN EN 13501-1	Bfl classification	
Ozone resistance	DIN ISO 1431-1	Crack Assessment 0	

PRODUCT PROPERTIES					
Dimensions and Weight	Values	Static Bed Modulus		Dynamic Bed Modulus (load range 0.02 - 0.10 N/mm ²)	
		Load Range [N/mm ²]	Value [N/mm ³]	Frequency [Hz]	Value ± 15 % [N/mm ³]
Width ca. [mm]	1250	0.02 - 0.10	0.06 ± 15 %	5	0.091
Thickness ca. [mm]	18			10	0.095
Length ca. [m]	10			20	0.100
Weight ca. [kg/m ²]	10.1			30	0.102

Certificates

Ciprotec 6018 complies with DIN 45673, part 5 and has been tested and proved by: TU München, MPA NRW and Müller-BBM. Test reports are available on request.

The contents of this publication are the result of many years of research and experience gained in the application of this technology. All information is given in good faith; it does not represent a guarantee with respect to characteristics and does not exempt the user from testing the suitability of products and from ascertaining that the industrial property rights of third parties are not violated. No liability whatsoever will be accepted for damage – regardless of its nature and its legal basis – arising from advice given in this publication. We reserve the right to make technical modifications in the course of product development.

© Copyright – Calenberg Ingenieure GmbH – 2021

Rev. 0

6 December 2021

Calenberg Ingenieure GmbH | Am Knübel 2-4 | 31020 Salzhemmendorf | Germany | info@calenberg-ingenieure.de | www.calenberg-ingenieure.com