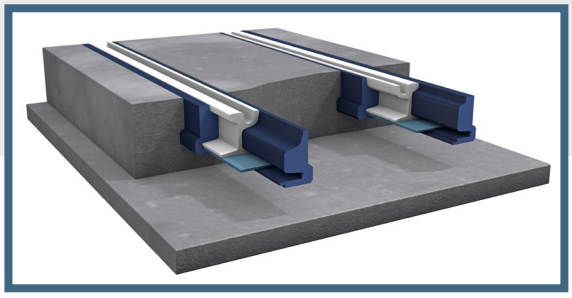
Pandrol QTrack®

EPD Summary Report

Pandrol is proud to be the first manufacturer in the field to be assessed and certified to EPD criteria in recognition of the impressively low carbon footprint of our sustainable resilient systems. Like all our products, these reflect Pandrol's commitment to reducing the environmental impact of railway infrastructure.

Pandrol QTrack® is an embedded, ballastless track system that maximises the availability, safety and lifetime value of the track. The system itself provides vertical and lateral support to the rail, while reducing vibration transmission from the rolling stock to the surrounding structures and granting control of the electrical currents flowing out of the rails (known as stray currents).



High performance

Noise and vibration attenuation are achieved while reducing the CO_2 impact of railway infrastructure construction.

Easy to install

Fast and easy to install, the Pandrol QTrack® is a maintenance-free system designed to last the lifetime of the rail.

Eco-friendly

All Pandrol sustainable resilient systems are made from recycled material and are 100% recyclable.

What is an Environmental Product Declaration?

Internationally accepted, an Environmental Product Declaration (EPD) is a transparent, third-party audited comparison tool that uses scientific parameters to measure a business' or product's environmental impact. Independently verified and used across all sectors, the EPD process supports increased understanding of environmental impact throughout the supply chain and provides businesses with a benchmark for continuous improvement.

The EPD Process

Lifecycle analysis

All elements are considered for a detailed lifecycle analysis, from the collection of raw materials, through production, to transport to the customer.

Third-party specialised audit

Auditors work with Pandrol to collect data relating to all stages of the product lifecycle. Real-life examples of manufacturing and shipping to customers were used.

Real data of product lifecycle

The data is used to measure the impact of each stage of the product's lifecycle on the environment.

Carbon footprint score

Environmental impact and carbon usage at each stage is used to populate an impact report and give each product a comparable carbon footprint score.

Public report available

The EPD report is available for everyone to download from the EPD library. The report details the full process for collecting the data and the findings for each stage.

Pandrol QTrack® EPD results

Example below is for QT-55G2-HP-R-Strip-32 with ELEC-L. Pandrol can provide specific value for each system and project needs.

Acid Rain mitigation

Gases such as sulphur dioxide (SO_2) react with water in the atmosphere to form acid deposition in a process known as 'acid rain'. Acidification Potential (AP) measures a product's impact on acid rain.

Pandrol QTrack® results show there is only 0.1% SO_2 eq per kg of product. This means by choosing Pandrol QTrack® as a sustainable alternative, less acid rain will fall.

Pandrol QTrack®: 0.036 kg SO_2 eq / lmr

Ozone depletion

Ozone-depleting gases cause damage to the ozone layer. CFCs, halons and HCFCs are the major causes of ozone depletion. Ozone Depletion Potential (ODP) measures how many of these harmful chemicals are emitted during a product's lifecycle.

Pandrol QTrack® results show nearly no ODP (0.003 mg per linear meter of rail to be accurate!). This means that choosing Pandrol QTrack® as a sustainable alternative has no impact on ozone layer depletion.

Pandrol QTrack®: 0.000000003 kg CFC 11 eq / lmr

Global warming reduction

Human activity releases greenhouse gases into the atmosphere, causing changes to the global temperature and resulting in changes to the Earth's climate. Measuring Global Warming Potential (GWP) quantifies a product's impact on climate change.

Pandrol QTrack® results show a minimal impact on global warming.

Pandrol QTrack®: 26.5 kg CO_2 eq / lmr

Water pollution

Water pollution can lead to the death of aquatic plants and animals and leaching of fertilisers into the water table leads to eutrophication. Eutrophication Potential (EP) measures the impact a product has on water quality and animal populations.

Pandrol QTrack® results show limited impact on water quality. By choosing Pandrol QTrack® as a sustainable alternative, quality of aquatic life improves.

Pandrol QTrack®: 0.006 kg PO_4^{3-} eq / lmr

Pandrol QTrack® key facts

Every kilometer of railway track installed with Pandrol QTrack® saves 20,000 tyres from landfill or burning.

Pandrol saves 730 tonnes of CO_2 per km of railway track installed compared to industry average polyurethane solution. To give an idea of how much CO_2 this is, it's the equivalent of an average passenger vehicle driving 6.1 million km or, 153 times around the globe!

Footprint comparison

According to the United Nations Environment Programme, the building sector contributes nearly 40% of global green house gas emissions.

Pandrol QTrack® is the lowest carbon footprint available on the market versus competitors.