

STRAIL[®]WAY

SLEEPER MADE OF 100% PLASTIC RECYCLATE.



strail
meets
railway.



PLASTIC SLEEPERS *for highest demands.*

1 | APPLICATION

STRAILWAY > full recyclate plastic sleeper.

Traditionally, railways and undergrounds as well as tram lines and city railways drive on lines furnished with sleepers made of wood, steel or concrete. Every material has its advantages and disadvantages. The service life of the sleeper types is different, but always limited.

Wood has to be treated with chemicals, which is done by soaking it in creosote, the tar oil waste product. That is why wooden sleepers will present a problem later on: Firstly, they release approx. up to two liters of the environmentally harmful creosote into nature. Secondly, it will be difficult to dispose of them. Therefore, there is the ambition to use alternative materials in Europe from 2018 on. Concrete sleepers cannot be used in all situations, e.g. they are too heavy to use them for bridges and unsuitable for sections with a high frequency of shunting and a risk of immediate total loss. An alternative to wooden sleepers has been required for several years.

STRAILWAY -/ we think green.

Since the end of 2014, the RPT® plastic sleeper, now with the new name STRAILWAY plastic sleeper (= STRAIL & railway) is one of the products of STRAIL® and completes the product range of KRAIBURG STRAIL® GmbH & Co. KG.

STRAIL® produces compact plastic sleepers which consist of secondary raw materials. Furthermore, the production process is uncomplicated.

The product is patented and after the bridge sleeper also the normal track sleeper has been approved for field testing with unlimited speed and axle loads by the EBA (Federal Railway Authority) in Germany. The EBA's given approval for switch sleepers (for axle loads of ≤ 225 kN and a speed of ≤ 160 km/h) also allows the substitution of wooden sleepers.

The basis material for the STRAILWAY plastic sleeper is extruded plastic recyclate reinforced with fibres. Special additives ensure excellent mechanical properties. The sleeper leaves the machine as an endless, homogenous string and is cut to the length required. From this moment on, it is treated almost like a wooden sleeper. The difference to other sleepers: No artificial resin, complex pultrusion techniques or specially reduced parts such as steel reinforcements are used.

STRAILWAY is highly resistant against environmental influences and chemicals while reducing railway noise and vibrations significantly.



2 | DATA

STRAILWAY - we think green.



Partners of STRAIL® are the companies PAV® Berlin (Plastic- Aufbereitungs- u. Verarbeitungsgesellschaft mbH & Co. Vertriebs KG) and the non-profit Kunststoffzentrum in Leipzig GmbH (KuZ). Together and with the help of several institutes, they developed and tested different recipes with recycling materials which can be used for the plastic recyclate sleeper.

The STRAILWAY plastic sleeper has also passed the "Vibrogir" test for railway sleepers in France. The resistance of the STRAILWAY plastic sleepers is such that the industrial customer BASF Chemical Park Schwarzheide uses them in the area of the filling system for sodium hydroxide.

By the way, for an annual production of approx. 100,000 of STRAILWAY plastic sleepers, only 5% of the German plastic waste material which would be suitable is needed.

Benefits

- ◆ good eco-balance due to the use of secondary raw materials
- ◆ recycling of operational residues > 100% recyclable
- ◆ long service life > low life-cycle costs (can be used longer than wood)
- ◆ processible nearly like wooden sleepers (e.g. sawing, milling, planing, drilling, plating)
- ◆ treatment does not present any health risk > no WHO fibres (= plastic and glass fibres with critical dimensions) were detected. (test report available upon request)
- ◆ weight and handling similar to wood
- ◆ screw-withdrawal values better than with wood
- ◆ noise reduction > residents can live more quietly
- ◆ chemical and weather resistant

Nothing changes for the plating in the sleeper production plant > the STRAILWAY plastic sleepers can be processed without changing the existing production lines. The patented STRAILWAY plastic sleepers have gotten several approvals by the EBA (Federal Railway Office) for field testing.



www.strailway.com



STRAIL[®]WAY


made
in
germany

-/ Kunststoffschwellen / plastic sleepers

KRAIBURG STRAIL[®] GmbH & Co. KG

D-84529 Tittmoning | Goellstraße 8

tel. +49 (0) 8683 / 701-0 | fax -126 | info@strailway.com

STRAIL | STRAILastic | STRAILway are brands of the  group.