



  
**Jeevan**  
Ecotex  
Sustainable Weaves

Railways

The railway sector has benefitted widely in every sphere with the use of geosynthetics. From enhancing track bed performance and significantly extending maintenance intervals, to using non wovens for seat berths and head rests, EcoSynthetics is extensively used.

Jeevan Ecotex has developed and provided a wide range of engineered products and solutions that are specifically manufactured using state of the art production facilities. These successfully address every problem faced by the railway industry.



## Applications

### New Railway Lines

Interface between  
blanket and subgrade /  
prepared subgrade

### Rehabilitation of Existing Lines

Between Subgrade and  
cleaned ballast

### Side Drains

Aggregate drain  
wrapped with filter

Perforated pipes  
covered with filter

All products are adhering to **RDSO2020/GRS/IRS-004.**

# Functions

Application	Benefits	Products Used
Track Beds	<ul style="list-style-type: none"> <li>✔ Stabilizes the foundation and allow it to withstand dynamic loads</li> <li>✔ Prevents leaching of soil particles</li> <li>✔ Allows free passage of water</li> <li>✔ Increases bearing capacity</li> <li>✔ Increases speed of train</li> </ul>	EcoTextiles, EcoGrid
Embankments	<ul style="list-style-type: none"> <li>✔ Reinforcement</li> <li>✔ Strengthening</li> <li>✔ Compensates the insufficient shear strength of the soil</li> </ul>	EcoNet , EcoTextile, EcoCell, EcoPipes
Cam & Caulking bag for bullet trains	<ul style="list-style-type: none"> <li>✔ Injection, Moulding</li> <li>✔ Prevents erosion pumping and bag for Slab and Anchor</li> </ul>	EcoBags Non-woven EcoTextiles bags
Service Roads	<ul style="list-style-type: none"> <li>✔ Significantly increases maintenance intervals</li> <li>✔ Subgrade stabilisation</li> <li>✔ Reduces the thickness of aggregates</li> <li>✔ Paving of the Roads</li> </ul>	EcoTextile, EcoGrid, EcoCell
Fire barrier for seats	<ul style="list-style-type: none"> <li>✔ Low flammability</li> <li>✔ Low toxicity</li> <li>✔ Flame retardant</li> </ul>	Nonwoven

# Products Used



**EcoTextile**



**EcoGrid**



**Corrugated  
Perforated Pipe**



**EcoCell**



# Benefits



## Mud pumping reduction

Geosynthetics have the ability to prevent water ingress through the ballast layers in rail lines into the capping layer below. Preventing over saturation of the capping layer prolongs the service life preventing costly turnout maintenance.



## Reinforcement

Geogrid reinforcement significantly reduces tie displacement not only at low subgrade modulus values and effective subgrade shear strength parameters, but is equally effective at reducing tie displacement within the subballast thickness range of 450–1000 mm.



## Easy Execution

When constructing rail tracks over soft subgrade soils with a low bearing capacity, the foundation layers can be reduced or improved by using geogrid. This can also reduce subgrade excavation, spoil disposal, while still achieving the target stiffness value required to support the ballast.



## Long life span

Geosynthetics increase the life span of rail track and reduce the replacement interval time frames. This significantly reduces whole of life costs when compared to traditional track formations and construction methods.

## About Us

Jeevan Ecotex is a leading manufacturer of technical textile since the last 30 years, with state-of-the-art modern equipment from Europe and manufacturing facilities at multiple locations. It is an ISO 9001: 2015 certified company offering customised solutions.

## Why Jeevan Ecotex

We are uniquely placed as the only major geosynthetics player with in-house installation capabilities and our own manufacturing unit. Other advantages are –

- ✔ Strong brand association with reputed clients
- ✔ Continuous online monitoring of production
- ✔ Traceability with no human errors
- ✔ Products customised as per requirements
- ✔ Cost effective & eco-friendly manufacturing methods

Jeevan Ecotex Private Limited

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