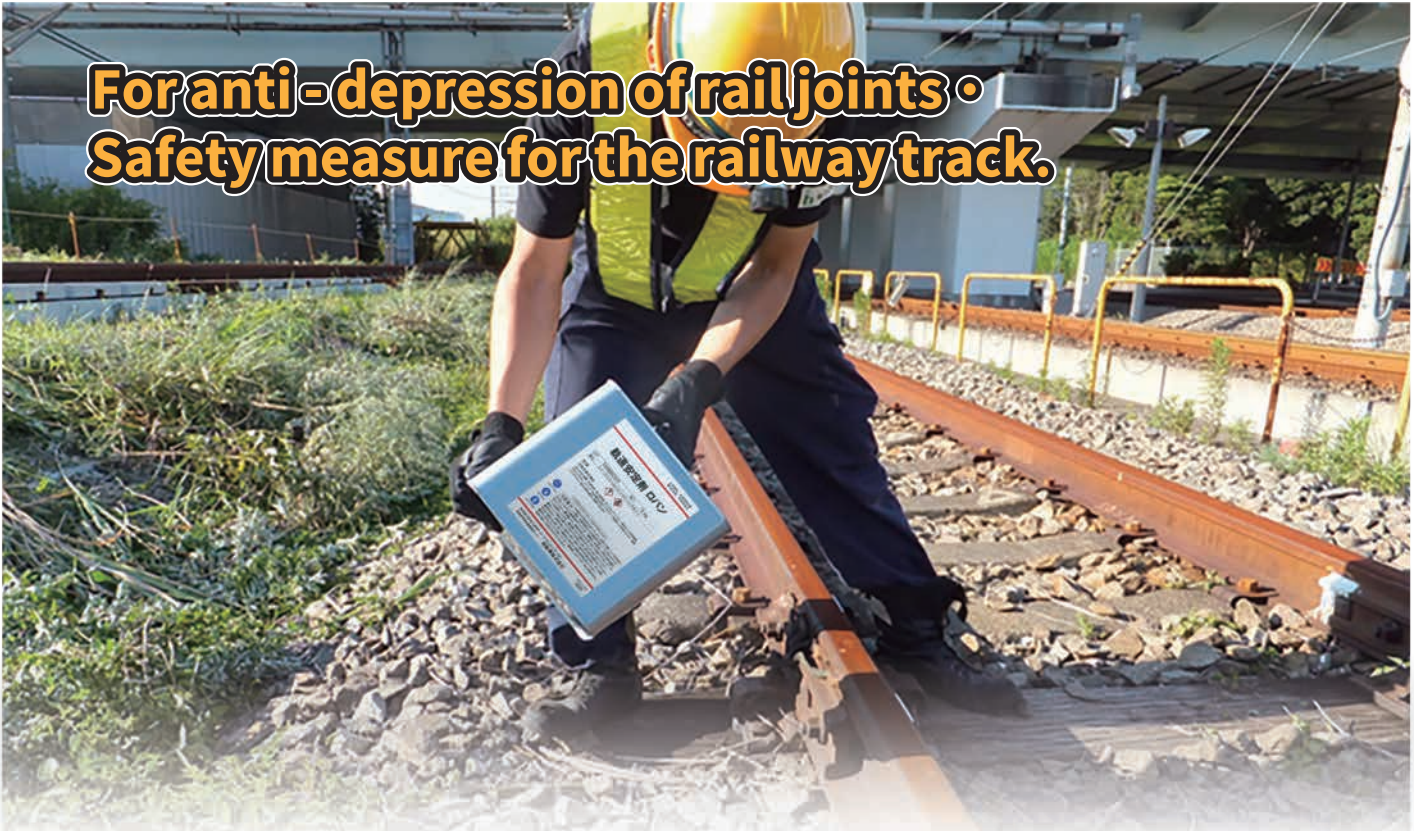




ROBAN Ballast (Track bed) stabilizer



**For anti - depression of rail joints •
Safety measure for the railway track.**



Recent tendency of the railway track condition such as speeding-up the train, increase of passing tonnage by long formation of train cause the depression of rail joints and bad influence to attached facilities.

These tendencies naturally influence the stability of the track including ride quality.

We, Hayashi Soji Corporation, developed new track bed stabilizer which is not just for hardening the track bed but also keeping a certain level of flexibility of the ballast and prevent the depression of rail joints which influence the stability of the rail track.

Significant benefits



10L / CAN

- Easy installation due to liquid type stabilizer.
- Just open the can and scatter the stabilizer.
- Easy to carry (10 Litter Can).
- Quick hardening (The surface will be hardened in about 20 minutes).
- Can be applied in all season.
- The scattering area for one can (10 L) shall be about 1.5 sleepers.

Safe & Secure

- Can be preserved for about one year without opening the lid.
- This is moisture curing type stabilizer.



WARNING

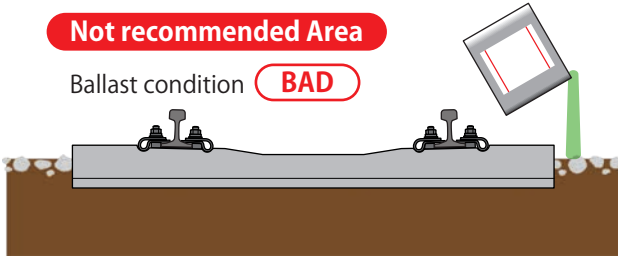
- When scattering ROBAN, please use protective gloves and protective glasses.
When ROBAN get in the eyes, please wash the eyes with fresh water for several minutes.
When adhere to the skin, please wash with a lot of water and soap.
- Once ROBAN can is opened, please use it all at once.
- Please store ROBAN in the sealed can at cool/dry circumstances.
- Please do not scatter ROBAN under the rainy condition.

1. The condition of application for Ballast Stabilizer “ROBAN”

“ROBAN” will maintain the sound condition of railway track by applying on the track where the ballast conditions are good without deterioration of the ballast.

Not recommended Area

Ballast condition **BAD**



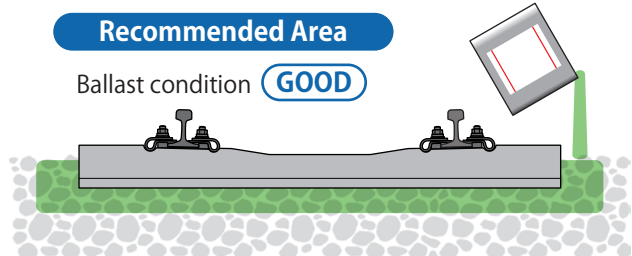
We cannot expect good effect because ROBAN will not penetrate directly under the sleeper and stick around.

Grain refined ballast / Mud pumping Area ▶



Recommended Area

Ballast condition **GOOD**



ROBAN will penetrate directly under the sleeper and create the wall.

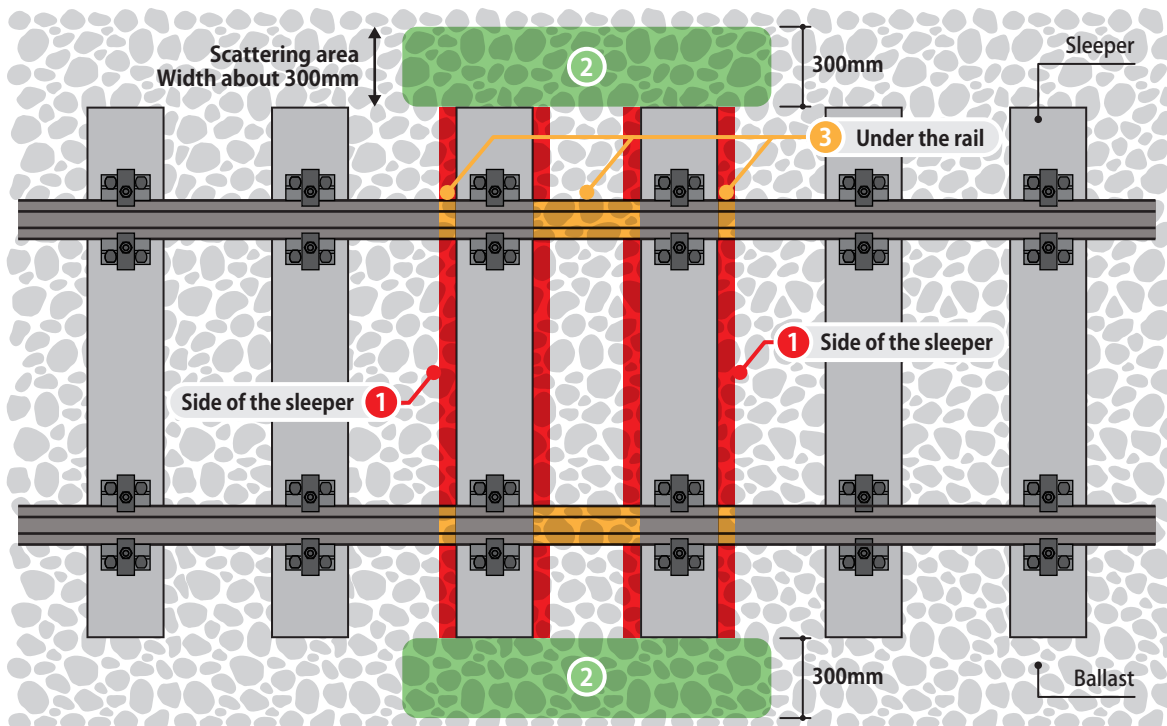
Good ballast condition ▶



2. Scattering area of “ROBAN”

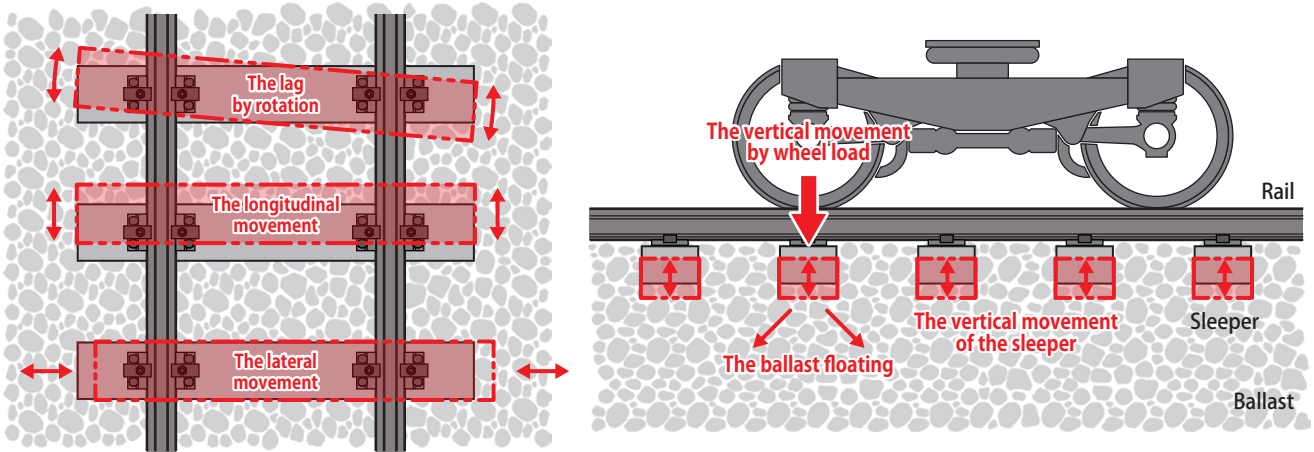
- 1 Open the can and scatter ROBAN along the side of the sleeper.
- 2 Scatter ROBAN at the end of the sleeper up to 300mm from the end.
- 3 Pour ROBAN under the rail. (Easy to pour with the watering pot)

We recommend to scatter ROBAN at above mentioned area.
Please scatter evenly to the following areas using one can of ROBAN.

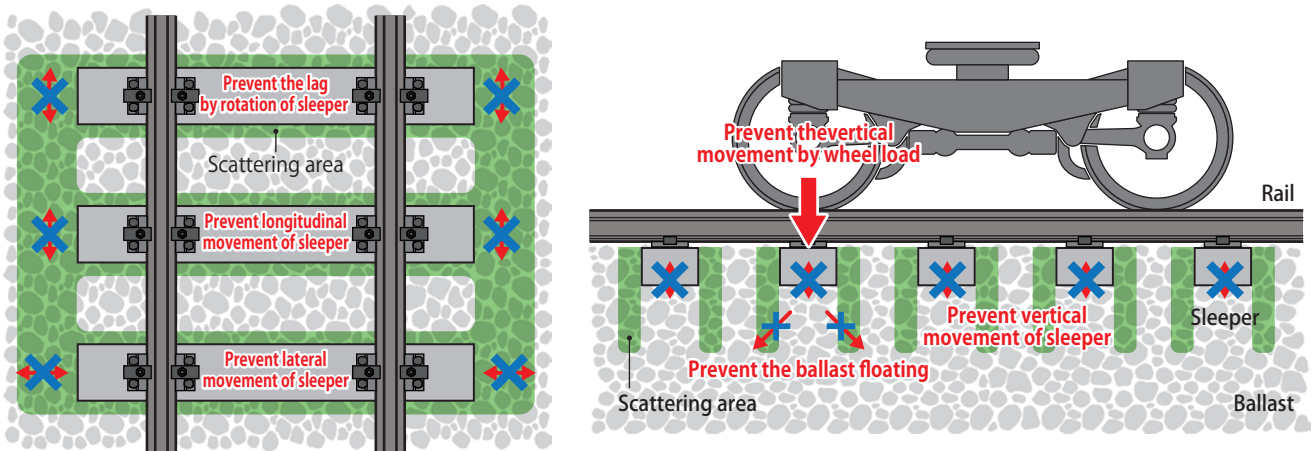


3. The effect of scattering "ROBAN"

The condition of sleeper before applying ROBAN



The condition of sleeper after applying ROBAN



The prevention of the lag by rotation, longitudinal and lateral movement shall be materialized by scattering ROBAN around the sleepers.

The prevention of ballast floating and minimizing vertical movement shall be materialized by applying ROBAN & filling the space under the sleepers.

Total manufacturer of safety equipment for railways

Hayashi Soji Corporation

5-12-14 Omori Higashi, Ota, Tokyo 143-0012 JAPAN

Phone : +81-3-3762-8451 FAX : +81-3-3762-8454 (JR) 057-3344

<http://www.hayashisoji.com/> e-mail: info@hayashisoji.com

Recipient of the Ministry of Economy, Trade and Industry's 300 Vibrant Small- and Medium-Sized Manufacturers award

Recipient of the City of Ota's Excellent Factory and Overall Achievement award