Under R&D

Icetool Pavement

Elastic Resin-Bonded Anti-Icing Pavement

Revêtement Icetool

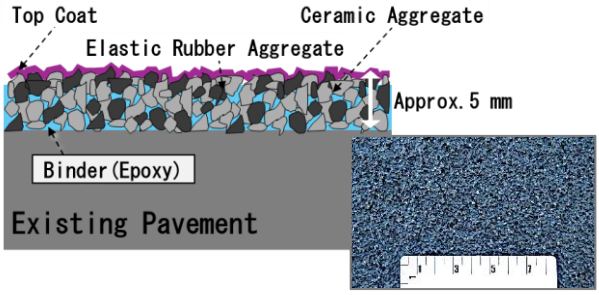
Revêtement antigel élastique à liant résine

What is Icetool?

- A type of pavement in which elastic aggregate and hard aggregate are bonded to the pavement surface with resin. Snow and ice that form on the road surface in winter are stripped and crushed by the elasticity of the elastic aggregate, while the hard aggregate suppresses tire slippage, thereby ensuring vehicle safety during winter conditions.

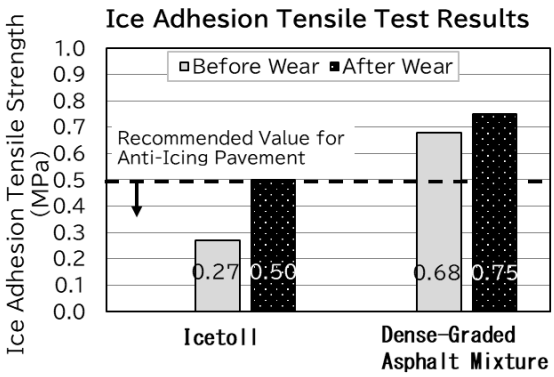
Features

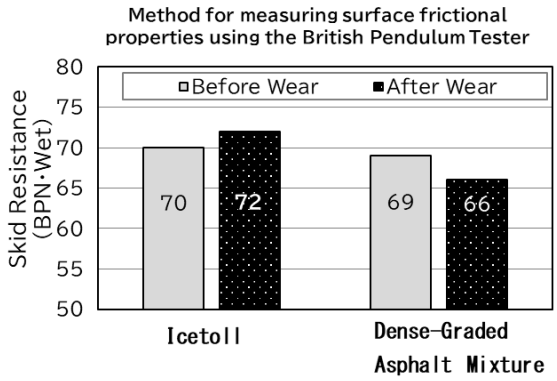
- Anti-icing pavement in which a mixture of rubber elastic aggregates and hard aggregates is bonded to the pavement surface with a resin binder.
- The elastic force of the elastic aggregate strips and crushes snow and ice that form on the road surface under vehicle traffic in winter.
- The hard aggregate improves skid resistance, thereby suppressing tire slippage.



Effects

- Strips and crushes snow and ice on the road surface under vehicle traffic in winter.
- The hard aggregate improves skid resistance, thereby suppressing tire slippage.





Ice Adhesion Tensile Test

- A test to evaluate the ease of ice plate detachment from an anti-icing pavement: After water is absorbed, a jig with nonwoven fabric attached is frozen onto the specimen surface for a specified time at a controlled subzero temperature (−5 ± 1℃), and a tensile test is then performed.
- After abrasion: The test results are obtained after abrading the specimen surface using a raveling test to simulate road surface wear caused by winter tires and chains.

Demonstration test example

Location	City road, Nagano Prefecture, Japan
Construction area	75 m^2
Construction period	November 2020
Traffic volume classification (Pavement design traffic volume)	N4 (100 to 249 vehicles/day/direction)
Ice adhesion tensile test	0.20 MPa
Skid resistance BPN	66

NIPPO CORPORATION
https://www.nippo-c.co.jp/en/

NIPPO