



High Risk Gradient in Chile

TYREGRIP®

Key Details

Location:

**Tomé, Biobío Region,
Central Chile**

Date:

2024

Product:

PRISMO® TYREGRIP®

Application details:

Steep gradient

The Challenge

Located in the Tome district of Chile's Biobío Region, this steep section of road had become a recognised safety concern, particularly during periods of heavy rainfall. With a gradient of approximately 12%, vehicles experienced reduced traction when climbing the hill, while drivers travelling downhill faced longer stopping distances and an increased risk of skidding.

The route provides an important link for the local community, including school transport, making improved skid resistance essential to enhance safety and reduce the risk of accidents in wet conditions. To satisfy the requirements of the Chilean Ministry of Public Works, the completed surface also needed to achieve a skid resistance value exceeding 75 SRT.

**Assistant Operations Manager
Chile Project Team**

"One of the main advantages of Tyregrip® is that it reduces vehicle braking distances regardless of weather conditions."

Site Conditions

Ambient Temperature	19°C
Humidity	60 - 70%
Dew Point	11°C





Solution

Tyregrip® was the chosen solution for the project, and was installed on both the uphill and downhill carriageways to improve braking performance and vehicle control. Prior to the application, the temperature, humidity and dew point were carefully monitored to ensure optimum installation conditions. The pavement was then prepared to provide a clean, sound surface for maximum adhesion. The Tyregrip® epoxy binder was applied using a notched trowel with 6 mm teeth, and broadcast with 1-3 mm red calcined bauxite aggregate, achieving exceptional skid resistance exceeding 75 SRT.

Result

The completed installation delivered a significant improvement to vehicle steering response and grip, increasing uphill traction and reducing downhill stopping distances in both wet and dry conditions. In wet weather, the highly textured surface promotes water dispersion while maintaining exceptional skid resistance, helping drivers negotiate the steep gradient as well as improving access for local traffic and school transport. The distinctive, vibrant red finish provides a strong visual warning to road users, encouraging drivers to exercise caution when approaching the hazard. The system was praised for its uniform application, consistent friction, and minimal maintenance.

With a 38-year proven track record, Tyregrip® transformed this stretch of road into a safer route for years to come.

Key benefits delivered:

- Outstanding skid resistance achieved for improved vehicle control and braking in all weather conditions
- Highly visible hazard demarcation to alert drivers
- Improved grip between tyres and road surface

