

# Polyurethane Resin Surfacing Product Performance

Outlined below please find:

- Demonstrated product performance
  - Winter Weather
  - Coastal Zone Installations
- Rainwater Management Percolation Data

## Demonstrated Product Performance –

### Winter Weather

Polyurethane Resin Paving offers outstanding performance against US winter salt, sand, snow plows, and freeze/thaw cycles.

- **Salt and Sand**
  - Poly resin permeable paving is unaffected by salt and requires less maintenance than other pervious surfaces including permeable asphalt, concrete, and pavers. Mixing aggregates from 1 to 5 mm (1/4" minus) with polyurethane resin creates paving that filters water into the base reservoir system. Sand and sediment are not allowed to infiltrate through the resin paving and clog the system. So, unlike other pervious paving systems, polyurethane paving requires no ongoing vacuuming maintenance, with only light pressure washing recommended.
  - Poly-resin paving systems require less salt and sand over the winter. See the following link for a summary from Minnesota DOT and University of New Hampshire Stormwater Center research publications.
  - See additional information here: [Porous Pavement Winter Performance - UNH and MN DOT](#)
- **Snow plows and freeze/thaw cycles –**
  - Three-year Chicago, IL ColdGrip test, – James Corner Group tested Polyurethane resin surfaces over three Chicago winters before choosing GeoGripX to surface sidewalks in Polk Park at Navy Pier Chicago. See Polk Park images here - <https://www.completestreetsusa.com/portfolio>
  - Eleven-year-old Moonachie, NJ GeoPrint crosswalk installation -
    - In municipal north east applications, polyurethane resin surfacing provides a longer lifespan than other epoxy and thermoplastic resin overlay systems
    - Poly resin provides exceptional Performance after a decade of winter snow plowing when [installation best practices](#) are followed. See NJ Crosswalk images in this [gallery](#).

## Coastal Zone installations

The increased moisture tolerance of our hybrid polyurethane resin makes it an excellent choice for coastal installations. Geveco (Adbruf) cures the resin binder underwater as part of their routine Quality Control (QC) testing. Additionally, the resin can tolerate rain once it's been down for 20-30 minutes. Notable performance in humid coastal environments is included below.

- Headland War Memorial - Resin Bonded textured surfacing – 2003  
16 Cliff Terrace, Hartlepool, UK  
This WW1 memorial lies at the tip of a peninsula that juts out into the North Sea.  
[Headland War Memorial Google Maps Link](#)
- The island of Malta's Transportation Authority (MTA) – Resin Bonded textured surfacing – ongoing  
MTA specifies ColdGrip on island roadways. Malta is 9 miles across with an average annual humidity of 73% [Malta case study](#)
- Garscube Link Walkway in Glasgow – Resin Bound Paving – 2010  
This revitalized link is the gateway point connecting a large area of North Glasgow back to the City Center. Glasgow is on the River Clyde which empties into the North Atlantic.  
[Garscube walkway Google Maps Link](#)

## Rainwater Management Percolation testing -

- Polyurethane permeable paving (GeoBondX) provides a Low Impact Development (LID) technique for Green Infrastructure to support Rainwater Management Requirements
  - Filters an average 180 gal/min/SF
  - Filters sand and sediment from clogging polyurethane resin paving system or migrating into underlying base of porous asphalt and subbase of stone.