

Tora Petrol, Istanbul, Turkey

Fibrelite's Watertight Manhole Covers Help Protect Petrol Stations Against Flash Floods in Istanbul



Project Overview

Fibrelite provided Tora Petrol with fully watertight, GRP composite manhole covers which help protect fuel tanks across Turkey's Marmara region. These proved invaluable during the July 2017 floods, where Fibrelite's composite manhole covers minimised fuel tank damage by preventing surface water ingress. The Marmara region is home to Turkey's largest city, Istanbul.



Fibrelite's watertight GRP manhole covers are installed at petrol stations across Istanbul and surrounding areas

Problem

Turkey's Marmara region is the most populated region in the country, despite having the second smallest area. Its dense population means that there is a lot of pressure on petrol stations. To avoid unwanted disruption from refuelling and maintaining underground fuel tanks, they need to be quickly and safely accessed through manhole covers. These covers also must be able to withstand the everyday stresses of constant traffic, including vehicles with heavy loads; whilst proving a safe walking and driving surface.

The Marmara region can be prone to heavy rainfall due to its surrounding seas, high mountain ranges, and variations in height over short distances. Some petrol stations in the region therefore specified manhole covers which could withstand the threat of flooding. This is vital, as if surface water leaks through the manhole covers, there would be a substantial risk of fuel contamination which is both very costly and time-consuming to rectify. Resistance to corrosion from water and fuel was crucial to this as it can cause a less than perfect fit, allowing water ingress.



Some petrol stations in Istanbul were submerged during the July 2017 floods

Solution

Fibrelite provided Tora Petrol with watertight composite manhole covers at a number of petrol stations across the Marmara region. These were put to the test in July 2017 when torrential rain swamped transport networks, buildings, and offices, causing widespread flooding across Istanbul and surrounding areas. This left sections of the city underwater, including petrol stations both on the E5 highway and in the coastal area. Despite the floods, Fibrelite's watertight manhole covers prevented any ingress of surface water into chambers above the fuel tanks.

As well as being lightweight – typically a third of the weight of an equivalent-size cover produced in metal or concrete, Fibrelite manhole covers eliminate the risk of back injury and crushed fingers with their ergonomically-designed lifting aid, which enables safe lifting from waist height. The covers also provide a safe walking and driving surface even when wet, which has been tested to be equivalent to a modern high-grade road surface. Manufactured using a specialised composite material, they will not corrode over time unlike metal and concrete, meaning that they will perform for the life of each site.



Fibrelite's covers prevented surface water ingress into chambers above the fuel tanks

Results

Fibrelite provided Tora Petrol with a cost-effective, sustainable, composite solution, that has made petrol stations in the Marmara region more resilient, efficient and safer.

“Thanks to Fibrelite, for preventing any underground storage tank damage and for protecting our customers from any pecuniary loss and intangible damages during the heavy rainfall that caused flooding in Istanbul last July. It is really great how not even a single raindrop went into the fuel tanks while all roads, subway stations, and petrol stations were affected by hailstones and heavy rain. Let’s just imagine the worst case, if water would have penetrated the underground tanks, we would have had to remove the product and complete gas freeing by disassembling all fittings and pipes connected to the contaminated tank which would have left the concerned petrol station out of service for a significant amount of time. This would have caused time and economic loss, plus a bad customer experience, causing potentially loyal customers to slip away. Instead, we received positive feedback from petrol stations and their customers who were grateful to have fully watertight composite manhole covers. So again, thanks a lot Fibrelite!”

Ertum Tufekci, Board Member, Tora Petrol

For more information on the OPW product range please contact us:

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