

Key features & benefits

Firestone GeoGard EPDM, a high-performing rubber liner

Firestone GeoGard EPDM is an elastomeric synthetic rubber geomembrane with a cross linked structure, resulting in a chemically stable geomembrane with unique features and benefits.

Key features and benefits

Firestone GeoGard EPDM is a strong, flexible and elastic geomembrane that will keep its exceptional performances for a long period of time.

- **Exceptional longevity**

The chemical composition of Firestone GeoGard EPDM (high proportion of carbon black and saturated carbon chains) and the fact that it is vulcanized means that the EPDM geomembrane benefits from an unmatched resistance to UV, heat, ozone, microorganisms and extreme weather conditions. Projects installed over 40 years ago are still functional and are therefore living proof of this durability.

- **High flexibility**

Firestone GeoGard EPDM is highly flexible even at low temperatures down to -45 °C, still after several decades of exposure. This facilitates installation as the geomembrane adapts to irregular shapes and lays flat on the substrate, whatever the outside temperature.

When mechanically stressed at low temperatures, Firestone GeoGard EPDM retains all of its flexibility and its resistance is not jeopardized.

- **High elastic elongation**

Given the significant level of cross-linking in its carbon chains, the Firestone GeoGard EPDM can be elongated by over 300% in all directions and return to its initial form afterwards. This high elasticity allows Firestone GeoGard EPDM to absorb substrate movements without its physical properties being affected.

- **High puncture resistance**

Because of its highly flexible and elastic nature, Firestone GeoGard EPDM also offers excellent static puncture resistance. This is a very important characteristic in withstanding the mechanical stresses which the geomembrane sustains during installation and service and consequently guarantees long term watertightness of the lining system.

- **High resistance to hydrostatic pressures**

Firestone GeoGard EPDM has almost unlimited resistance to hydrostatic pressure, which allows for its use in deep, large capacity water reservoirs.

- **High friction angle**

The Firestone GeoGard EPDM high friction angle (27.5°) facilitates the installation process

(workers do not slide on it and the geomembrane stays in place), and as it is more stable on the slopes it doesn't require the use of textured geomembranes if covered. It also reduces the risk of accidents during installation and in use.

- **Quick and easy installation**

The installation and assembly of the Firestone GeoGard geomembrane are extremely simple and allow for a perfect finish. The Firestone accessories and the membrane's flexibility allow sealing even the most intricate details. No machine or heat is required and the number of seams is limited in view of the large dimensions of the panels (from 93 m² up to 930 m²).

The completion and quality of the seams are not affected by folds or waves which are likely to form with temperature variations.

- **Easy to repair**

Given the inert nature of Firestone GeoGard EPDM, its composition does not vary over time. Consequently, the geomembrane can still be assembled and/or repaired many years after being installed and having been exposed to climatic elements. Repairs are quick and easy to carry out.

- **Environmentally friendly**

Firestone GeoGard EPDM geomembranes is an inert material with low environmental impact during production and use. In addition, Firestone's EPDM manufacturing facilities have received ISO 14001 certification, a testimony of the company's commitment to environmental management.