The Pioneer Of Geosynthetics

S I N C E 1 9 7 2

Application Sheet

High Density Polyethylene Geomembranes

GSE HD geomembranes are high quality high density polytheylene (HDPE) geomembranes that provide the following benefits:

- Excellent UV resistance
- Excellent chemical resistance
- Outstanding stress crack resistance
- Lowest permeability
- History of proven performance
- Meet or exceed all aspects of GRI GM 13

GSE HD smooth is available in either a black, green, white or Conductive upper surface. GSE HD textured is available in either a single or double-sided textured geomembrane with a black, green, white or Conductive upper surface.

GSE textured geomembranes.

PREMIUM RAW MATERIAL

GSE HD products are made from high quality high density polyethylene resins. To these resins, carbon black, antioxidants and UV stabilizers are added to assure long term performance and UV resistance even in exposed conditions. The absence of leachable additives and fillers to all GSE geomembranes allows them to maintain excellent resistance to brittleness that may occur over time.

GSE QUALITY ASSURANCE SYSTEMS

All GSE geomembrane production involves three levels of quality assurance. First, raw material suppliers must comply with GSE specifications on incoming resin. Before the resin is unloaded from the railcar, GSE verifies the raw material test results that are submitted by our suppliers by performing selected conformance tests. The second level of QA begins during actual production. As each roll is produced it is electronically monitored for pinholes. Finally, GSE HD products undergo a rigorous Quality Assurance program after production to ensure the mechanical properties are intact and meet or exceed GSE current quality standards. All GSE laboratories are certified GAI-LAP standards.

GSE round die extrusion process.

CHEMICAL RESISTANCE

The chemical resistance of HDPE is the best of any available geomembranes. GSE HD is chemically resistant to a wide variety of chemicals including aromatic and halogenated hydrocarbons. They have been used successfully for years as primary and secondary landfill liners, secondary containment and mining heap leach pads.

STRESS CRACK RESISTANCE

GSE HD is manufactured from resins specially designed to provide outstanding resistance to stress cracking. The appendix to ASTM D 5397, Single Point Notched Constant Tensile Load, is the test method most commonly specified for determination of stress crack resistance. GRI GM 13 requires a minimum of 300 hours to failure. GSE requires that every lot of resin used to manufacture GSE HD geomembranes has a minimum of 1,000 hours.

PERMEABILITY

Permeability of HDPE geomembranes is the lowest of any available geomembranes. This coupled with outstanding chemical and stress crack resistance combine to maximize the integrity of containment for any application.

BENEFITS OF A ROUGHENED SURFACE

Perhaps the most important attribute textured geomembranes offer is the ability to improve geosynthetic profile stability which ultimately maximizes the available volume that can be contained by the geomembrane. The ability to line steeper slopes

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Application Sheet

allows increases in design capacity providing cost savings. Further, the white upper surface of GSE White has the same physical properties as the black

GSE White pond.

with the added benefit of a light reflective layer. This light reflective layer reduces heat gain, thereby reducing wrinkling, subgrade desiccation and worker fatigue.

IN-LINE TEXTURING DECREASES LEAD TIME

GSE HD textured is manufactured using coextrusion technology – the same technology used by GSE for over thirty years to produce GSE UltraFlex, GSE Conductive and GSE White geomembranes. GSE HD textured meets the increasing need for textured HDPE geomembranes because it is an in-line one-step texturing process. Availability to GSE customers is increased and lead times are minimized.

PROVEN RELIABILITY

GSE HD geomembranes have a long history of reliability and proven performance. Hundreds of millions of square feet of GSE HD geomembranes have been sold and installed. They have been used in wide ranging containment applications including potable water, decorative ponds, animal waste containment, landfills, canal linings and secondary containment. In addition to their exceptional performance, GSE HD geomembranes have excellent weldability under a variety of conditions. Extrusion and fusion welding can be performed with ease and confidence.

GSE HD can be used to line pregnant solution ponds in mining applications.

ENGINEERING SUPPORT

The GSE Engineering Support Staff is comprised of multidisciplinary product professionals to support you across a range of project requirements. This includes knowledge in geomembrane, geosynthetic clay liners, geonet, geocomposite, nonwoven geotextile and concrete protection products and application solutions. Rely on our technical staff to help you solve your project issues.

GSE Engineering Support Staff.

CUSTOM FABRICATION

The GSE Custom Fabrication Group builds products to your exact specifications. We have extensive experience in prefabricated polyethylene products and components. A few examples of our custom fabricated products are Aqua Tanks, Quick Containment, concrete protection liners, boots, sumps, pads, pipes, daily covers, temporary containment, containment boom and other products to fulfill your fabrication needs.

StudLiner Sumps.

INSTALLER NETWORK

The GSE Installer Network leads the industry with the most experienced, large, and flexible crews available around the world to meet your installation requirements. Each installer is equipped with state-of-the-art welding and testing equipment to ensure a successful installation. Selecting a qualified installer with the right product knowledge is critical to your success. Let GSE connect you to the right installer to handle your installation project of any size from start to finish.

AP32HD 082224/11

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