



Mining & Industrial

The SmartDitch® System

Surface Water Runoff Solution to Protect
Valuable Water & Land Resources

SmartDitch® - Protect the Environment and Manage Toxic Water Runoff

Stormwater run off from mining and industrial operations is a big threat to land and water quality in both urban and rural areas. Mining and industrial manufacturing activities produce toxic surface residues that can be found on rocks and sediment or on the paved storage yards of factories, warehouses, scrap yards and transportation hubs. These residues often carry pollutants like heavy metals, pesticides, sulfur and other chemicals. Left unmanaged, these residues can mix with stormwater and contaminants that can be harmful to community stormwater sewer systems as well as the land, local rivers, lakes and coastal waters.

The SmartDitch system is an HDPE channel/ditch lining system that is ideal for permanent and temporary “no contact” water diversions, mining drainage pathways, erosion/sediment control, and industrial site water run off and containment. Compared to traditional channel lining methods, it offers superb corrosion resistance, is long lasting, light weight, less costly and easy to install and maintain.



SmartDitch was the ideal channel design solution to protect the land from chemical infiltration and direct the water and chemical discharges to a containment area.



SmartDitch MegaDitch proved to be the only sustainable solution to channel the stormwater/snow melt run off and solve the erosion issues at this mining operation.



The SmartDitch System is your common sense water run off solution if your facility is involved with mining, manufacturing, fabrication, salvage, hazardous waste treatment, storage or disposal.

Chemical Resistance Chart – Common Substances

Chemical or Substance Material	Polyethylene (73°F/23°C) ¹	HD Polyethylene (68°F/20°C) ²
Alcohol, ethyl	R	S
Antifreeze agents, vehicle	R	
Bleaching solution, 12.5% active chlorine	R	
Bleaching solution, 5.5% active chlorine	R	
Brake fluid	R	
Diesel fuel	R	
Diesel fuel / oil	R	S
Ethane	R	
Fertilizer salts, aqueous	R	
Fuel oil	R	
Gasoline	R to C	L
Hydraulic fluid / oil	R	
Hydrogen peroxide, aqueous 10% - 90%	R	S
Jet fuels	R	
Mercury, liquid	R	S
Methanol, pure	R	S
Motor oil	R	S
Nitric acid, 0% - 30%	R	S
Nitric acid, >30% - 50%	R to C	L
Petroleum, sour, refined	R	
Sea water	R	S
Selenic acid	R	S
Sewage, residential	R	
Soap solutions, aqueous	R	S
Sulfuric acid, 70% - 90%	R	S
Two stroke engine oil	R	

R = Material is generally resistant (Specimen swells <3% or has weight loss of <0.5% and elongation at break is not significantly changed).

C = Material has limited resistance only and may be suitable for some conditions (Specimen swells 3% - 8% at weight and loss of 0.5% - 5%)

S= Satisfactory. The chemical resistance of HD polyethylene exposed to the action of a fluid is classified as “satisfactory” when the results of test are acknowledged to be “satisfactory” by the majority of the countries participating in the evaluation.

L= Limited. The chemical resistance of HD polyethylene exposed to the action of a fluid is classified as “limited” when the results of test are acknowledged to be “limited” by the majority of the countries participating in the evaluation.

¹Information gathered from Chemical & Abrasion Resistance of Corrugated Polyethylene Pipe, Corrugated Polyethylene Pipe Association. Though different in physical design, SmartDitch maintains the same resin cell classification as the samples in this report. A more complete listing of polyethylene’s chemical resistance can be obtained by contacting the Corrugated Polyethylene Pipe Association.

²Chemical Resistance Table Low Density and High Density Polyethylene. Summary of data given in a number of chemical resistance tables at present in use in various countries, derived from both practical experience and test results. ISO/TR 7472, 7474; Carlowitz: “Kunststofftabellen-3. Auflage”.

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