



**ARIAN KHAK IRANIAN**  
**GEOSYNTHETICS**



**GEOMEMBRANE**  
**HDPE/VLDPE/PVC/LLDPE**



# GEOMEMBRANES



Geomembrane

New Insulation Systems

**AKI Geomembrane** is produced in various types namely PVC, LLDPE, VLDPE ,HDPE by using polyethylene polymers (PET) with different densities, polyvinyl chloride (PVC) and polypropylene (PP) in order to insulation of varied applications

### HDPE

High density polyethylene ( HDPE ) is a best waterproof material and is widely used for the insulation of various storage ponds in all over the world because of strong resistance against chemicals ultraviolet and environmental stress crack.

It usually contain 97% compressed polyethylene, about 2.5% black carbon and 0.5% antioxidant. Thus, this type of sheets is known as hard HDPE geomembrane too.

### PVC

Soft PVC or polyvinyl chloride with high elasticity and high tensile strength, which is very flexible compared to HDPE, and also can be installed on rugged surfaces.

### LLDPE

liner low density polyethylene (LLDPE) not only has the superior features as HDPE but also provides excellent flexibility and elongation hence is ideally suitable for lining projects which requirespecial flexibility .

### VLDPE

Low density polyethylene vinyl (VLDPE) is the newest type of geomembrane which is a combination of VINIL and LLDPE.



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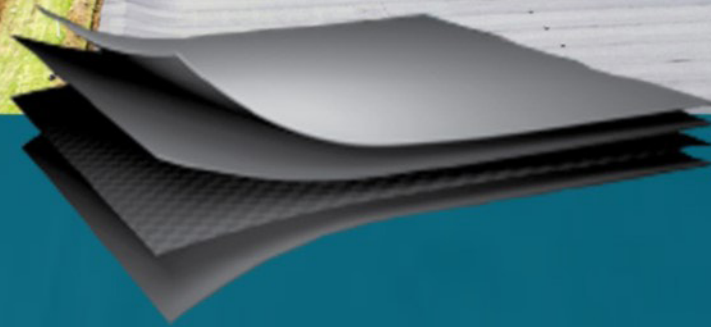
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**Advantages of AKI Geomembranes:**

- Ease of installation
- Extremely low permeability
- 100 years life expectancy when buried
- Puncture, abrasion and chemical resistance
- Environmentally responsible recovery and recycling program
- Low unit weight and superior seaming allows for construction of large prefabricated panels





### Physical Characteristics

#### **HDPE:**

Width: 4 & 2.20 Meter, thickness: 1 & 1.5 & 2 & 3 mm, Color: black, blue, white

#### **PVC:**

Width: 1.6 Meter, thickness: 1.5 & 2 mm, Color: black, blue, white

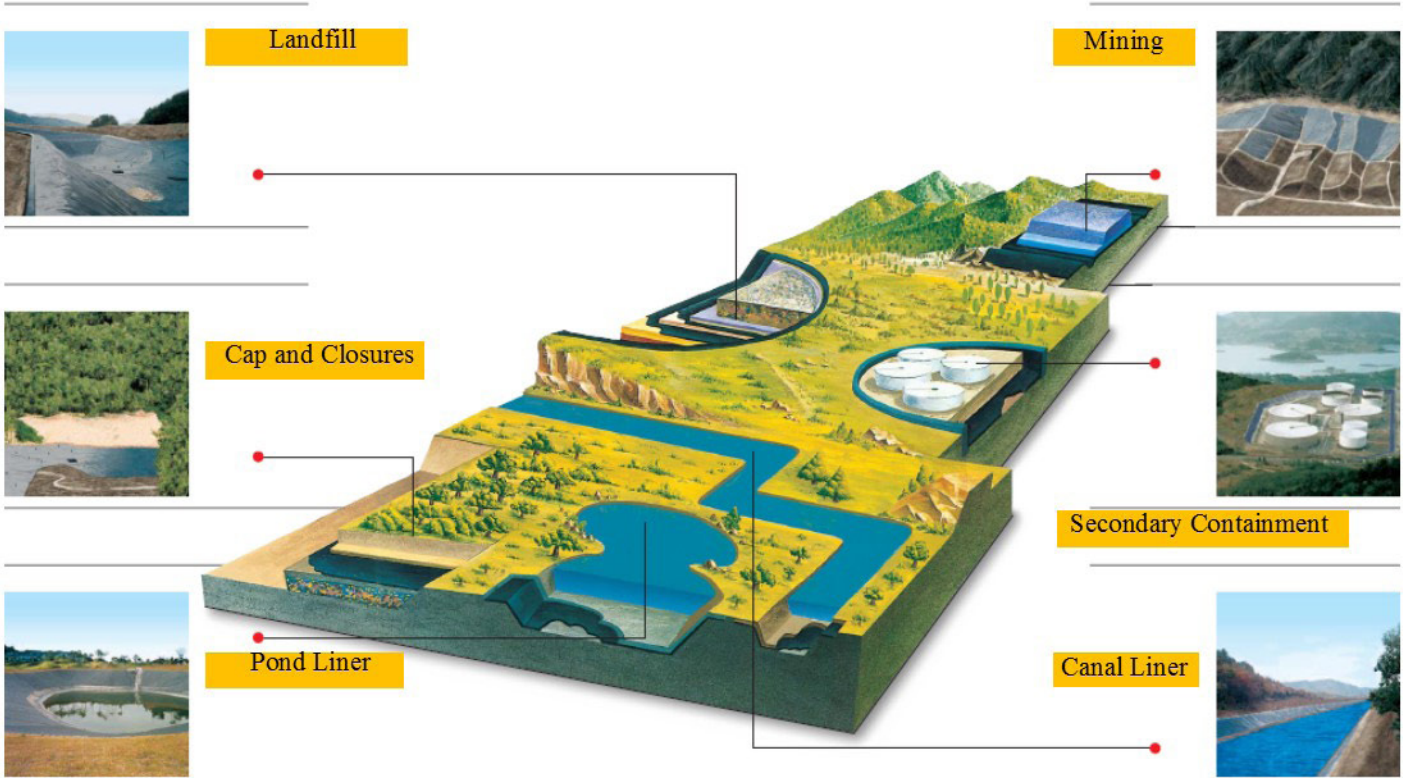
#### **LLDPE:**

Width: 2.2 Meter, thickness: 1.5 & 2 mm, Color: black, blue, white

#### **VLDPE:**

Width: 2.2 Meter, thickness: 1.5 & 2 mm, Color: black, blue, white

### Geomembrane Application



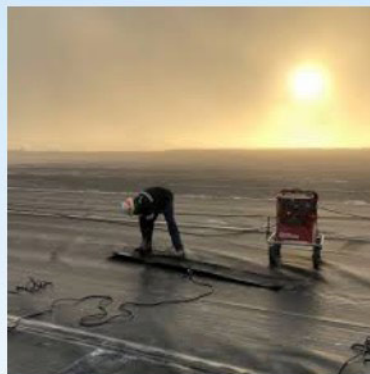
### **Aki Geomembranes for energy:**

Aki Geomembranes are widely used in the various storage ponds and dams for energy industries such as:

- Evaporation ponds and coal ash dams for coal-burning power plants
- Pumped storage ponds for hydroelectricity power plants and coal seam gas produced wastewater ponds and brine ponds.

They guarantee long-term performance for the applications mentioned  
With these features:

- Featuring superior impermeability
- Tensile strength
- storage resistance to puncture, UV radiation and environmental stress crack



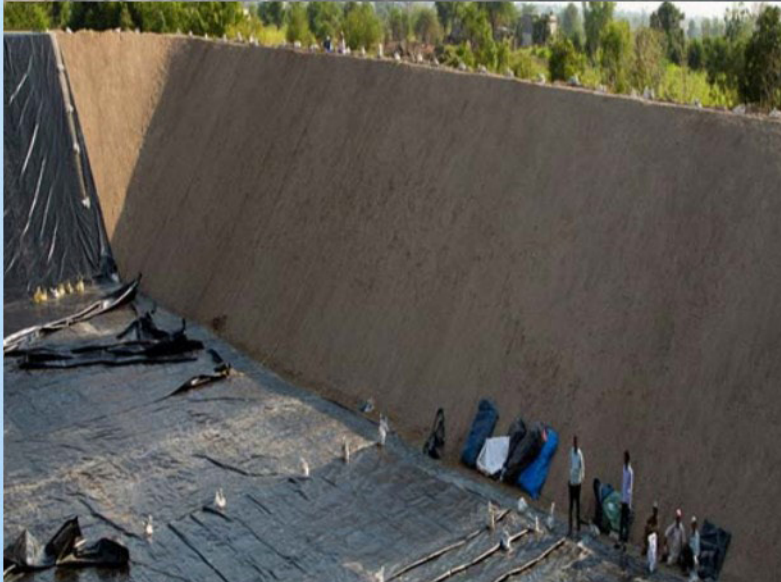
**Aki Geomembranes for water:**

AKI geomembranes are resistant to the UV radiation under an exposed environment in the long term so they are an ideal lining material for :

- aquaculture ponds
- Canals
- channels
- floating covers
- water containment application







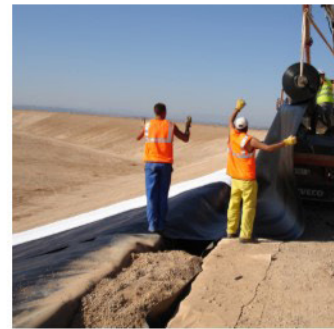
### **AKI geomembranes for waste management :**

AKI geomembranes generate a durable and reliable environmental protection solution. They are widely used for:

- Municipal solid waste landfills
- Hazardous material landfills
- Evaporation ponds
- Preventing contaminated groundwater from moving into storm water channel
- Preventing storm water from moving downward into buried waste

## **AKI geomembranes for mining:**

Mining applications require the most reliable barriers for the containment lining systems. AKI geomembranes with the best chemical resistance has been used successfully for many years as liners for mining heap leach pads and tailing dams.





## **ARIAN KHAK IRANIAN GROUP**

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