



WATER RESERVOIR HABONIM IRRIGATION & PVPP

Product	JUNIFOL PEHD 1,5 G/G	400 000 m ²
Location	Moshav Habonim, Israel	
Installation	2020	
Installer	KOMASHOV MISHORIM LTD	

The construction of water reservoir Habonim in Carmel coastal area in the North of Israel (not far from moshav shitufi HaBonim in Haifa district), has become the most extensive Israeli project of its kind in the period of the last 5 years. The main purpose of the reservoir taking up the area of 40 ha with the overall capacity of abt. 3,5 mil. m³ of water is to serve as utility water source for irrigation of nearby agricultural zones. There is, however, an additional task the project is going to fulfill – panels with photovoltaic cells installed on the surface of water in the reservoir will make it the largest floating photovoltaic power plant (PVPP) in Israel. The project is being owned by CARMEL COAST WATER CORPORATION.

The construction process was a demanding one because of the amount of earthworks needed and the required volume of material transfer on site. Only clay-soil type of subsoil found in situ was used, no other material was brought to site from any external sources. The artificial banks of the reservoir are 17 m high, the upstream slopes were designed with the gradient of 1:4 and the length of 70 m, the sides of the rectangular shape bottom are approx. 450 m long.

As the main liner fulfilling the function of an insulation layer, a polymeric geosynthetic barrier (geomembrane) made from high density polyethylene was used. The geomembrane **JUNIFOL PEHD** (which must have met the strict criteria stipulated in the US GRI-GM13 Standard Specification - Test Methods, Test Properties and Testing Frequency for High Density Polyethylene (HDPE) Smooth and Textured Geomembranes) was manufactured and supplied by JUTA a.s., a manufacturing company residing in the Czech Republic, professional installation of the liner was carried out by an experienced Israeli installation company **KOMASHOV MISHORIM LTD**. It took approximately 40 days to cover the entire area of the reservoir (geomembrane rolls being 8 m wide), thus arriving at a remarkable average installation rate of 10 000 m² per day.