

Best Practice Guidelines:

Bladder Tank Above Ground Temporary Fuel Storage Systems - Jungle Regions



Background

The Jungle King Tank™ was specifically designed for liquid fuel storage. Born in the jungles of South America, it is ideal for hot humid wet climates. The Jungle King has a unique design and is constructed from a fabric exclusive to SEI. Designed with improved UV and hydrolysis resistance, it has a longer life expectancy than any other urethane collapsible fabric tank. The Jungle King is colored green to camouflage it. It has a unique vent system to handle flash rain falls.

SEI can provide the tank individually or as part of a jungle fuel system which includes:

- Primary storage tank with tropical vent
- Secondary containment berm
- Rainwater filter system
- SunShade

1. Fuel Bladders

a. The fuel bladder should be manufactured from a polymer fabric that consists of substrate (scrim) and topcoat (polyester) or (polyether) based polyurethane. The top coating must be compatible with the fuel being stored and the climate at the installation site. The substrate (scrim) is typically polyester or nylon woven base material.

b. Material shall be suitable for environmental conditions found in jungle operations (hot, humid and high UV climate). Key fabric specs include:

- Coating: Polyether polyurethane high density urethane with hydrolysis resistant adhesive package.
- Tensile strength after 90 days immersion¹, ASTM D-751 cut strip method: 400 lbs./in
- Adhesion (min) after 90 days immersion¹, ASTM D-751, dielectric weld: 37 lbs./in
- Diffusion rate (permeability), ASTM D-814 (JP-8 Fuel): 0.05 fl oz/ft²/24 hrs

c. All seams shall be radio frequency (RF) welded, complete with top and bottom cap strips, and body panels should be segregated. The welded seam strength shall be equal to or greater than the base material strength.