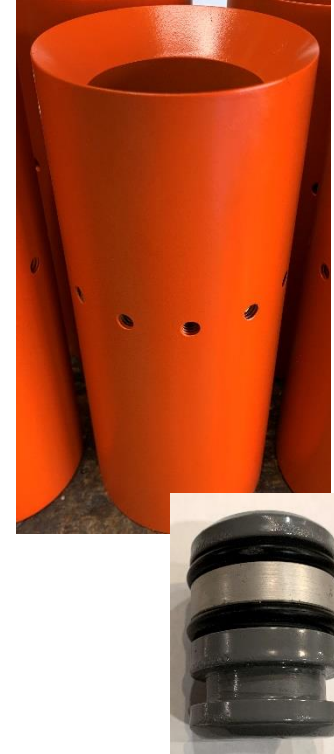


SES Solid Dissolving Pump-out Plug - Large Bore

The SES Solid Dissolving Pump-out Plug – Large Bore (SDP-LB) is used to form a temporary barrier in the tubing string to set a hydraulically actuated packer. The Patent Pending Solid Dissolvable Pump-Out Plug – Large Bore holds pressure from below until expended with tubing pressure, after which, the plug dissolves conveniently eliminating debris in your wellbore.

Also available in Ball Drop Configuration.



APPLICATION

- Temporary dissolving barrier in the tubing string to set a hydraulically actuated packer in single and dual completions

BENEFITS

- Low cost
- Wide choice of shear-out pressures
- Provides a tubing plug without well intervention

FEATURES

- Adjustable shear value
- Full bore after actuation
- Available in standard and premium threads and materials
- Plug coated to protect it from premature dissolution

DESCRIPTION AND OPERATION

The Solid Dissolving Pump-out Plug – Large Bore (SDP-LB) plug sub comes with a dissolvable plug which prevents the tubing from filling with fluid as it is run in hole. The shear settings are easily adjusted in the field. The required packer setting pressure is applied and held for the time required for the specific packer application. After the packer has been set, tubing pressure is increased to shear the pins retaining the plug. Once expended, the plug simply falls to the bottom of the well and dissolve in the well fluid, leaving the pump out plug housing with a fully open tubing ID.

The Solid Dissolving Pump-out Plug sub is designed to accommodate a maximum of eight to twelve shear screws dependent on the assembly's size.

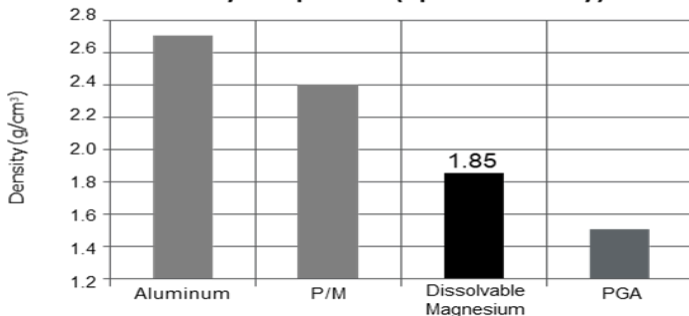
Tubing OD (in. [mm])	Pump-out Plugs				
	Sub Max. OD (in. [mm])	ID of Ball Seat (in. [mm])	Dropping Ball OD (in. [mm])	ID of Tool After Shear (in. [mm])	Setting Pressure (PSI/Screw+/15%)
2.375 [60.3]	3.068 [77.9]	1.250 [31.75]	1.325 [33.66]	2.000 [50.80]	637
2.875 [73.0]	3.668 [93.2]	1.250 [31.75]	1.325 [33.66]	2.500 [63.50]	408
3.500 [88.9]	4.500 [114.3]	1.250 [31.75]	1.325 [33.66]	3.460 [87.884]	362
4.500 [114.3]	5.563 [141.30]	1.250 [31.75]	1.325 [33.66]	4.000 [101.60]	438

Magnesium Alloy Dissolution

The magnesium alloy has a corrosion rate of 1100 MCD (milligrams/sq cm/day) in 3% KCl solutions at 200F. This high strength magnesium alloy has good ductility. The magnesium alloy needs at least 10,000 ppm chloride ion to corrode actively. To protect the magnesium alloy plug from beginning the dissolution process or corrosion during installation, a specialized coating is applied to the plug.

Magnesium Alloy

Materials density comparison (Specific Gravity)



Dissolvable Magnesium weight loss

