



## Dissolving Pump-Out Plug with Half Muleshoe (HMD-POP)

The Dissolving Pump-out Plug is used to Form a temporary solid barrier in the tubing string to perform a variety of downhole operations. Once the intended operation is complete, the solid plug is expended from the housing via applied pressure where it dissolves in the wellbore Fluids conveniently eliminating potentially troublesome debris in your wellbore. Also available with a Box by Pin In-Line Configuration, Wireline Entry Guide Configuration, and/or Ball Drop.



### APPLICATION

- Temporary dissolving barrier in the tubing string

### BENEFITS

- Low cost
- Wide choice of shear-out pressures
- Provides a tubing plug without a well intervention
- Eliminates interfering debris left in the wellbore

### FEATURES

- Adjustable shear value
- Full bore after actuation
- Shouldered housing eliminates stress on shear screws
- Available in standard and premium threads and materials
- Plug coated to protect it from premature dissolution

### DESCRIPTION AND OPERATION

The Dissolving Pump-out Plug sub is equipped with double O-rings and a proprietary coating prevent premature degradation. The shear settings are easily adjusted in the field. The housing is attached to the completion assembly and run-in hole. The required setting pressure is applied and held for the time required. The tubing pressure is increased to shear the screws retaining the plug. Once sheared, the solid plug simply Falls to the bottom of the well and dissolves in the well Fluid, leaving a Full tubing ID.

The Dissolving Pump-out Plug sub accommodates an adjustable shear value.

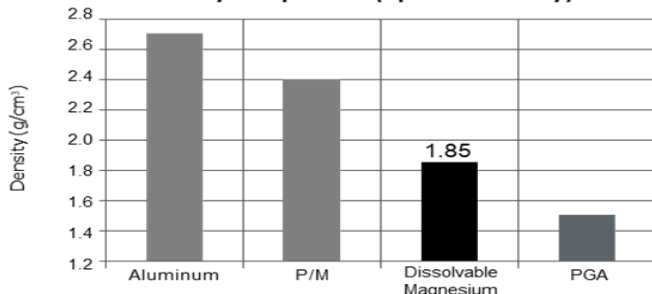
Tubing	Pump-out Plugs			
OD (in. [mm])	Sub Max. OD (in. [mm])	OD of Plug (in. [mm])	ID of Tool After Shear (in. [mm])	Setting Pressure Per Screw (PSI/Screw +/-15%)
2.375 [60.3]	3.068 [77.9]	1.900 [48.26]	1.800 [45.7]	700
2.875 [73.0]	3.668 [93.2]	2.300 [58.42]	2.205 [56.0]	480
3.500 [88.9]	4.500 [114.3]	2.740 [69.85]	2.65 [67.31]	573
4.500 [114.3]	5.563 [141.30]	3.823 [97.10]	3.725 [94.62]	477

### Magnesium Alloy Dissolution

The magnesium alloy has a corrosion rate of 1100 MCD (milligrams/sq cm/day) in 3% KCl solutions at 200°F. 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

