

0.93 SG ZeroIn-MT™

Dissolvable Ball Sealer - Medium Temperature



Optimize Fluid Diversion and Enhance Stimulations

The buoyant ZeroIn-MT lightweight dissolvable ball sealer, or “floaters”, will temporarily seal perforations designed to seat on the upper part of the casing in horizontal/deviated wells and provides the best ball action in vertical wells without having to catch the ball on the surface.

Applications

- Plug open perforations for cleaning scale and paraffin
- Improve stimulation by diverting fluid to lower-permeability zones
- Help manage fluid in hydraulic fracturing stages and refracs

Features

- Compatible with standard stimulation fluid additives
- Dissolves in freshwater, brine, and acid
- Differential pressure tested with fluid up to 4000 psi [27.6 Mpa] and 200 °F [93 °C]

Benefits

- Greater ball transport efficiency in horizontal laterals verse the traditional heavier (1.2 to 1.4 SG) ball sealers
- Quickly dissolves in hours after stimulation or fracturing stages
- Completely biodegradable material

Properties

Temperature range 75 - 200 °F [24 - 93 °C]

Appearance Gray

Specific gravity 0.93 +/- 0.05

Solubility Compatible with freshwater, brine, and acid; incompatible with nonpolar solvents, such as diesel, benzene, xylene, kerosene, toluene

pH fluids 0–12

Storage Keep product away from moisture; do not expose to temperature higher than 130 °F [54 °C]

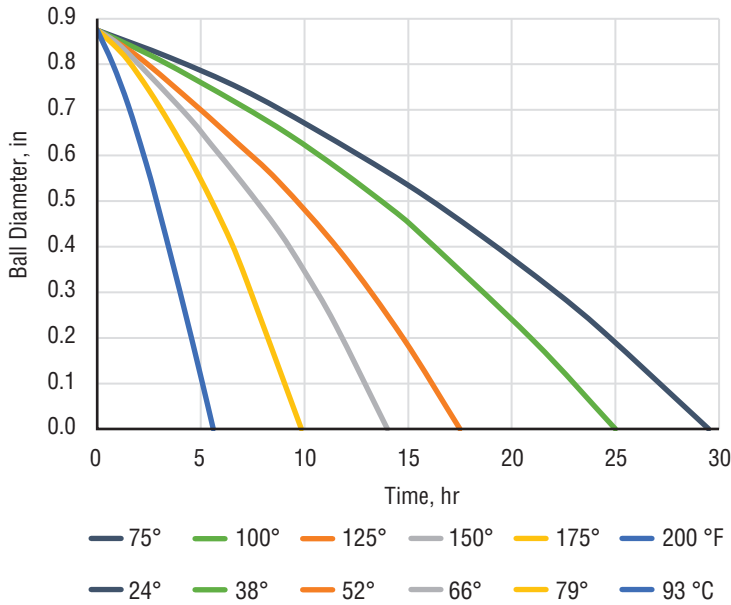
Size 0.50 in [13 mm]; 0.625 in [16 mm]; 0.875 in [22 mm]; 1.0 in [25 mm]; 1.25 in [32 mm]

Please soak the 0.93 SG ZeroIn-MT ball sealer in mineral oil, which prevents clumping, before inserting into the gun launcher.

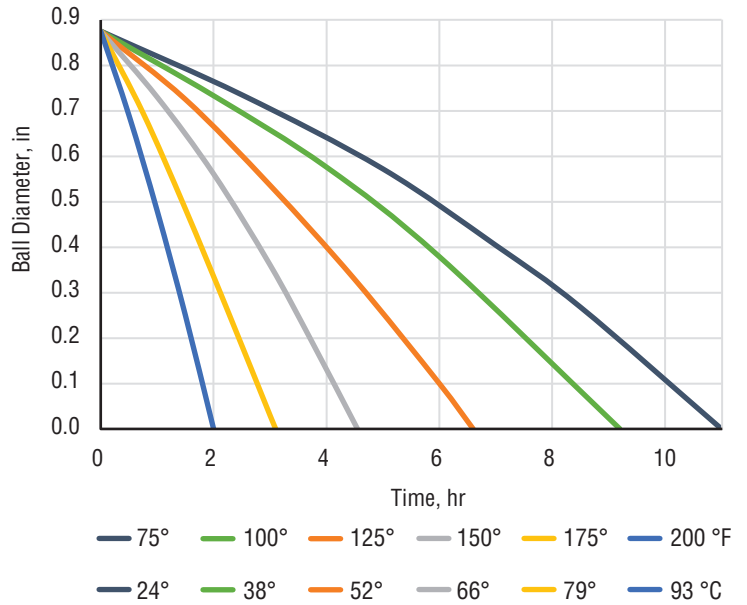


Dissolvability Rates vs. Time

Dissolvability Curves in 2% Potassium Chloride (KCL)
0.93 SG Zeroln-MT 0.875 in [22 mm]



Dissolvability Curves in 15% Hydrochloric Acid (HCl)
0.93 SG Zeroln-MT 0.875 in [22 mm]



Perforation Sealing Differential Pressure (ΔP) Sealing Time in Fluid vs. Temperature

| Temp °F [°C] | ΔP Sealing Time* (Hours) | | | |
|-----------------|----------------------------------|--------------------|--------------------|--------------------|
| | 2% KCL | | 15% HCL | |
| | 500 psi [3.45 Mpa] | 1000 psi [6.9 Mpa] | 500 psi [3.45 Mpa] | 1000 psi [6.9 Mpa] |
| 75 [24] | 17 | 14 | 6.0 | 5.1 |
| 100 [38] | 13 | 11 | 4.9 | 4.1 |
| 125 [52] | 9.5 | 8.0 | 3.6 | 3.1 |
| 150 [66] | 6.0 | 5.0 | 2.3 | 2.0 |
| 175 [79] | 3.2 | 2.5 | 1.5 | 1.3 |
| 200 [93] | 1.8 | 1.3 | 1.2 | 1.0 |

* Time based on 0.875 in [22 mm] ball diameter capable of sealing a perforation size of 0.40 in [10 mm]

For more information about our 0.93 SG Zeroln-MT medium-temperature, dissolvable ball sealer that increases fluid efficiency, please **call us: 844-277-7373** or **email: csr@perfsealers.com**.

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