

ZoneSelect® Metallic Hybrid Invisiball® Stimulation Ball

Isolates zones for stimulation treatments without the need for intervention or milling

Applications

- Multiple-zone slickwater and proppant fracturing
- Saline or acidic environments
- Wells with low reservoir pressure and production rates
- Horizontal and vertical wellbores
- Cemented and openhole wellbores

Features

- The ZoneSelect Metallic Hybrid (MH) Invisiball stimulation ball is made from a powdered-metal material containing magnesium, aluminum, and iron. This proprietary formula is optimized to hold against pressure during run in and to enable the ball to completely dissolve in saline or acidic environments.
- After stimulation is complete, the MH Invisiball stimulation ball dissolves downhole into a sand-sized powder. The rate at which the ball dissolves depends upon certain conditions, such as the salinity, acidity, and temperature in the wellbore. The ball will not dissolve in fresh water or oil.

Benefits

- Relative to the ball size and matching seat, the MH Invisiball stimulation ball can hold against higher pressures and temperatures than traditional composite frac balls. This provides a more reliable barrier in a broader range of downhole conditions.
- By dissolving downhole, the MH Invisiball stimulation ball eliminates the need for milling and reduces interventions—both of which help to reduce rig time and costs.

Tool Description

The MH Invisiball stimulation ball isolates zones during stimulation treatments and eliminates the need for milling.

The MH Invisiball stimulation ball drops from the surface, lands in an integral seat within the frac sleeve, and applies tubing pressure, which shifts the sleeve open. As the sleeve slides into the open position, the ball remains on the seat. By creating a barrier between zones, the ball enables the stimulation treatment to be pumped into the target zone.

After stimulation is complete, the ball dissolves downhole into a sand-sized powder. The rate at which the ball dissolves depends upon conditions such as the salinity, acidity, and temperature in the wellbore. The ball will not dissolve in fresh water or oil. As the ball dissolves off the seat, pressure is equalized



By dissolving downhole into a sand-sized powder, the ZoneSelect MH Invisiball stimulation ball eliminates the need for milling and reduces the risk of intervention.



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between zones. During screen-outs, the dissolving ball enables recovery without intervention.

The MH Invisiball stimulation ball is an essential part of the Weatherford ZoneSelect completion system and is compatible with a wide range of ZoneSelect products, including composite frac plugs and SingleShot, MultiShift, MASS, and i-ball® frac sleeves.

Specifications

Operating Characteristics of Weatherford Stimulation Balls

Characteristics	Ball Material		
	Composite	MH Invisiball	Aluminum
Specific gravity	1.8	1.8	2.75
Landing rate	15 B/M (2.38 m³/min)	15 B/M (2.38 m³/min)	15 B/M (2.38 m³/min)
Maximum temperature	325°F (162°C)	325°F (162°C)	325°F (162°C)

Sizes and Pressure Ratings of ZoneSelect® Frac Sleeves

System Size					
	SingleShot		MultiShift	MASS	i-ball
	XLC	MXZ	XLC	XLC	—
4.5 in.	40 zones at 8,000 psi (55.2 MPa)	59 zones at 4,000 psi (27.6 MPa)	40 zones at 8,000 psi (55.2 MPa)	16 zones at 8,000 psi (55.2 MPa)	Unlimited zones at 10,000 psi (68.9 MPa)
5.5 in.	40 zones at 8,000 psi (55.2 MPa)	67 zones at 4,000 psi (27.6 MPa)	40 zones at 8,000 psi (55.2 MPa)	18 zones at 8,000 psi (55.2 MPa)	Unlimited zones at 10,000 psi (68.9 MPa)

