

#### ENGINEERED CEMENTING SOLUTIONS

# **HIGH PERFORMANCE URETHANE FOAM WIPER BALLS**

Blackhawk Specialty Tools introduces a revolutionary new foam wiper ball whose material is extremely compressive, resulting in better wiping performance from fewer size variations. Our foam wiper balls are designed to separate fluids and wipe drill pipe or tubing, cleaning cement, fluids and debris from the inside of the pipe. Our material offers chemical compatibility to all drilling fluids and will operate in both high temperature and high pressure environments and offer great wiping performance.

### **F**EATURES

- Wipes drill pipe or work string to help ensure that cement and/or scale does not remain in the ID
- May be pumped ahead of or behind cement for fluid separation and to wipe sheath deposition from the work string ID
- Able to pass through ID restrictions such as mechanical setting tools, dart catchers and liner running tools
- Custom-created cell and strut size for enhanced performance and longevity
- Can be used in wide temperature range from -40°F (-40°C) to 300°F (149°C).

#### VALUE

- Offers excellent wiping performance for improved pipe cleaning.
- Increased strength, tear resistance and abrasion resistance compared to orange rubber foam balls.
- Greater contact band with pipe ID for improved wiping performance.
- Easier to load than solid rubber wiper balls, saving rig time.





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## **S**PECIFICATIONS

Size (Inches)	Part No.	Color	Wiping Range (ID in Inches)	Min. Restriction (Inches)	Orange "Foam" Rubber Ball Equivalent (Inches)
7	103202	Gold	2.375 to 7.015	2.375	8
6	106452	Gray	2.000 to 5.501	2	7
5	106451	Blue	1.875 to 4.700	1.875	6
4	106658	Green	1.750 to 4.010	1.75	5
3	106657	Yellow	1.625 to 3.130	1.625	4

Hardness, Shore A	ASTM D2240	49
50% Modulus, psi	ASTM D412	184
100% Modulus, psi	ASTM D412	236
Tensile, psi	ASTM D412	259
Elongation, %	ASTM D412	234
Tear, Die "C", psi	ASTM D624	91

Blackhawk's High Performance Urethane Foam Wiper Balls can be loaded and launched from our 6-5/8" Wiper Ball Drop Sub. The sub allows Nerf, Polyurethane and rubber wiper balls to be pre-loaded into an enlarged-ID handling sub and made up to the drill pipe for quick deployment into the landing string after completion of cementing operations.

## VALUE

- Reduced safety hazard and dropped object risks while loading Nerf or rubber wiper balls into drill pipe.
- Saves rig time by not having to force Nerf or rubber wiper balls into drill pipe.
- Reduced likelihood of damaging wiping ball during difficult installation.

