FABRIC WATERPROOFING SPRAY

Boating Magazine (Volume 88, Number 1) has a comparison of aftermarket water repellent treatments that can be applied to covers, attempting to rejuvenate the beading of water and water repellency.

They used a Markham coated fabric mooring cover that was in the Florida sun for 8 years. It was faded and leaking but was still intact and serviceable. After a good cleaning they began the application and testing.

The "beading" characteristic was tested through a spray test and a simple visual rating of 1 to 3 (good-better-best).

The "water resistance" was tested by standing a column of water on the frabric adding water and noting at what height the leaking occurred. The same visual rating was used: 1 to 3 (good-better-best).

According to their explanation, it seems they were attempting to follow the Textile Industry Hydrostatic Resistance Test AATCC-127 (measured in cm). We can't be certain as the test method used isn't referenced.

They provided the height in inches which we converted to cm. **Here are the results:**

	Water Column Height			
Water Repellent	**Inches**	**Centimeters**	**Beading**	**Column**
303 Fabric Guard	14"	35.5 cm	3	3
West Marine All Fabric Waterproofing	8"	20.3 cm	2	3
Star brite Waterproofing with PTEF	7"	17.8 cm	2	3
Dry Guy Waterproofing for Tent fabrics	5"	12.7 cm	1	2
Sea Safe Waterproofing	4"	10.2 cm	2	2
MaryKate Fabric Waterproofed	2"	5.1 cm	1	1

For Outdoor Fabrics

- All water resistant treatments wear off due to towing, wind, rain, snow, UV exposure. Discoloration is related to certain specific vinyls, not all. eventually becoming less effective at resisting water penetration. *Instead of water beading and running off, it begins to be absorbed by the fabric referred to as "Wetting Out."*
- A hydrostatic height of 50 cm is considered "shower resistant" and is susceptible to leaking under a hard rain, especially if water pools up.
- It is best to have a beginning height higher than 100 cm because coatings wear off, and the waterproofness value will decrease.
- Below 30 cm is considered ineffective, but beading water is an advantage because where the cover is tented (pitched), it allows the water to run off as opposed to wetting out the fibers.
- For a new mooring cover, the hydrostatic level should be a minimum of 140 cm, which will provide the best water resistance protection and for longer periods.
- Our BW material has a level of 170 cm.

These aftermarket applications provide a "water beading" feature with minimum pooling "Water Resistance".

Another very important characteristic is how long the application lasts. They did not test for this however and a hand spray type application will succumb to the wearing off issues because it is a "simple" mechanical bond, similar to applying polish to a car; it works for a short time.

Fabrics like our BW material are processed under factory conditions with a different chemical makeup that have a bonding component to extend its life. Although it will also eventually wear off, it will take significant time to do so.

Summary

"Beading" of water and the "hydrostatic resistance" are two different characteristics. It is possible to have "beading" with low "hydrostatic resistance," so the result is good water migration off the cover but minimal pooling water repellency.

There aren't many alternatives to maintaining water repellency and these products are not that costly. They provide some value and can be applied routinely to keep them working effectively.

These products will have to be applied often depending on the exposure conditions your cover experiences, but if applied routinely from the beginning it will extend the life of your cover.