

EVALUATION OF CHEMICAL RESISTANCE & FUNCTIONING POLYBAR+ SW

BeSealed[®] Polybar+ SW is a sealing bar especially developed for use in contact with salt water, manure or slurry. The product allows proper sealing under these circumstances and reveals a good chemical resistance.

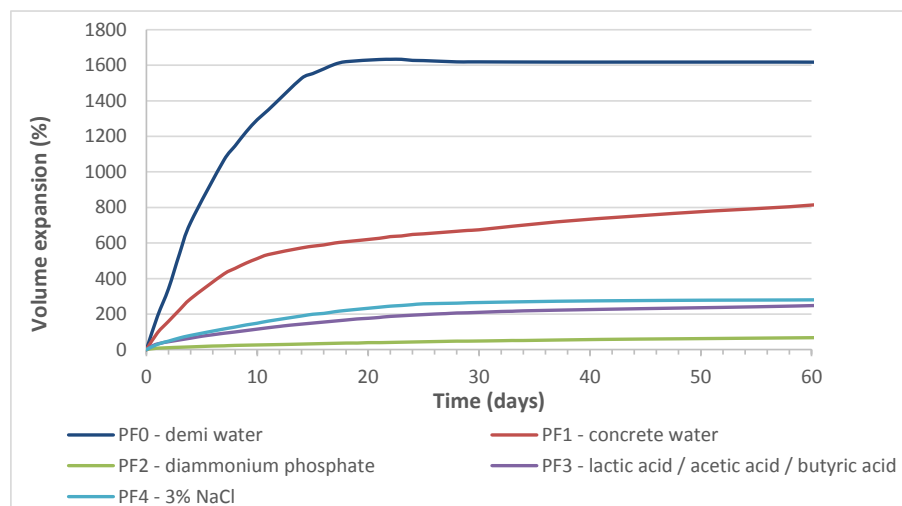
SITUATION

- Polybar+ SW is specially developed to guarantee sealing in contact with high salt concentrations, where the Polybar+ standard reveals an insufficient expansion.
- Polybar+ SW is typically applied in direct contact with sea water, manure and slurry.

TESTING: MFPA LEIPZIG PROCEDURE

1. Evaluation of expansion level in water, containing high concentrations of specific salts typical for sea water or manure/slurry
 - Swelling performance in reference water (concrete water)
 - Swelling performance in 3% NaCl water (sea water)
 - Swelling performance in 7% diammonium phosphate water pH 8.8 (manure/slurry)
2. Chemical stability/resistance against salts and acids, which are typically present in sea water and manure/slurry.
 - Swelling performance and stability in manure/slurry infected by bacteria: 3% lactic acid + 0.5% butyric acid + 1.5% acetic acid
 - Visual inspection after 90 days immersion and 10 days drying: applicable for all previously mentioned tests

SWELLING PERFORMANCE



CHEMICAL STABILITY

The chemical stability of the Polybar+ SW was evaluated visually. All samples were inspected for cracks after 90days immersion and the hardness was determined after 10days of drying at ambient temperature.

- No cracks were observed in the samples
- The hardness was stable, keeping in mind a slight increase due to salt absorption
- A reduced hardness for the samples immersed in PF2 is caused by retention of the testing liquid, resulting in a measurement on slightly swollen material

Hardness [°ShoreA]	After 90 days			
	PF1	PF2	PF3	PF4
Initial				
31	34	20	36	35

CONCLUSION

Even in sealing applications with high saline concentrations, Polybar+ SW reveals a sustainable (and effective) swelling performance. The evaluations performed, show that Polybar+ SW is very suitable for contact with manure, which in principal is a salt as well.