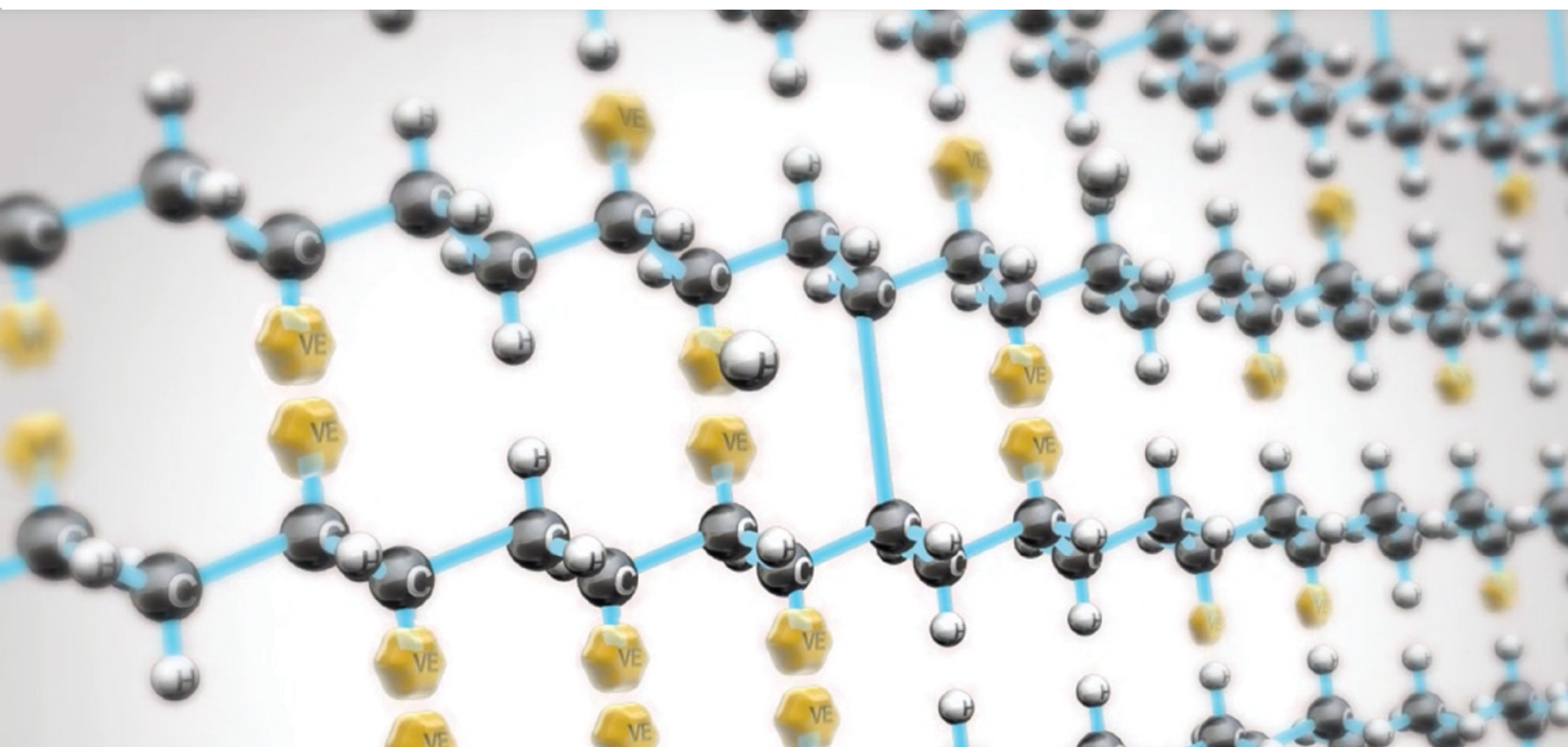




Zimmer®
Vivacit-E®
Highly Crosslinked
Polyethylene



Antioxidant protection for long-lasting strength and performance.



zimmer
Personal Fit. Renewed Life.™

No Compromises

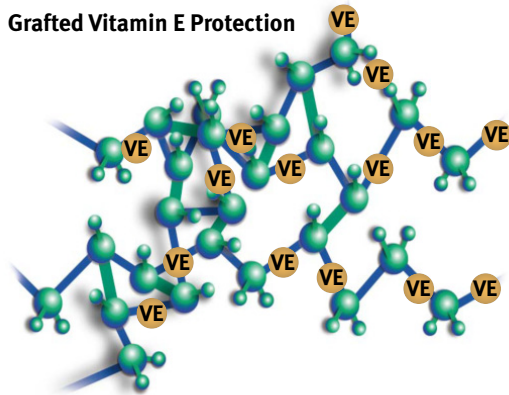
Through a proprietary process, *Vivacit-E* HXPE results in a technologically advanced material that ensures all of the desired polyethylene characteristics are maximized, *with no compromises*.

Exceptional Oxidative Stability

Enhanced Grafting Technology^{1,2}

- To prevent oxidation, Zimmer has developed a process which facilitates a phenomenon called “Grafting”
- Efficiently grafts (locks) 75-90% of Vitamin-E to the polyethylene chain
- Ensures durability and longevity of the polyethylene long-term

Grafted Vitamin E Protection

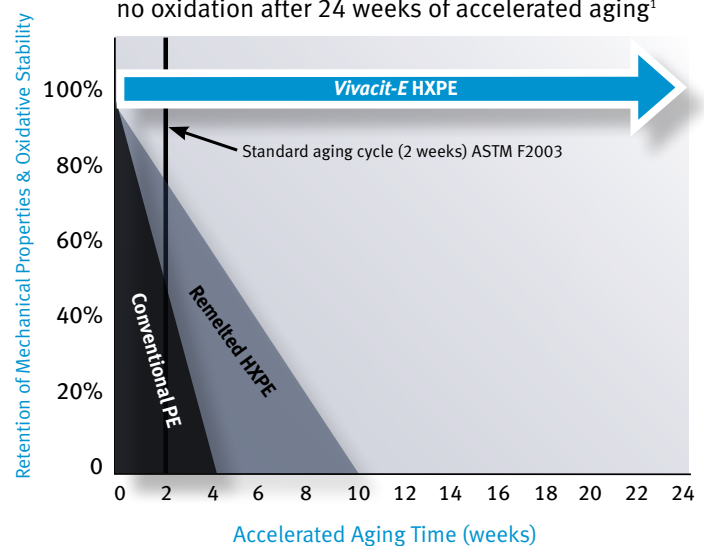


The Vitamin E is grafted (locked) directly to the polyethylene chain^{5,7} to prevent elution for long-term oxidative protection.

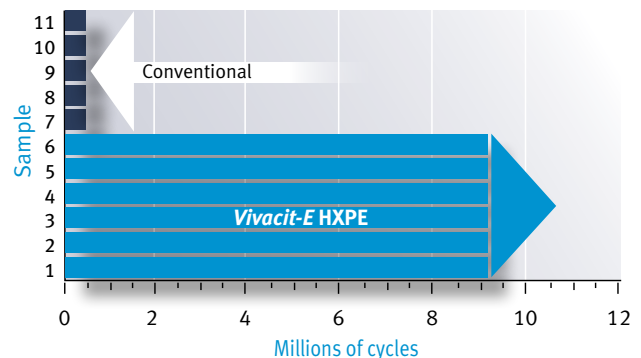
Vitamin E Protection That Prevents Oxidation¹

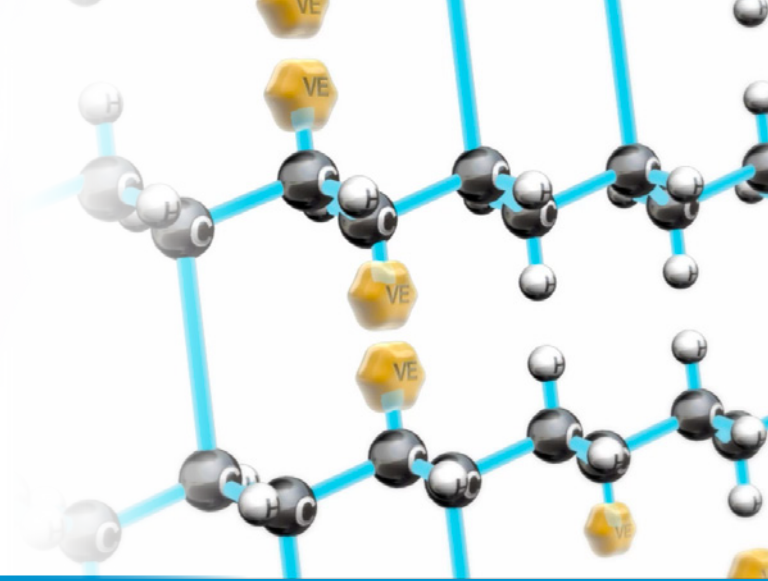
In-Vitro Oxidation Data (Accelerated Aging)

Vivacit-E HXPE retained mechanical strength and showed no oxidation after 24 weeks of accelerated aging¹



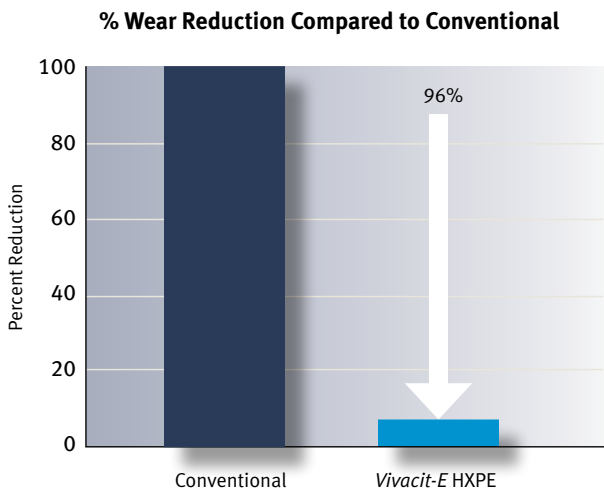
Delamination Resistance⁵





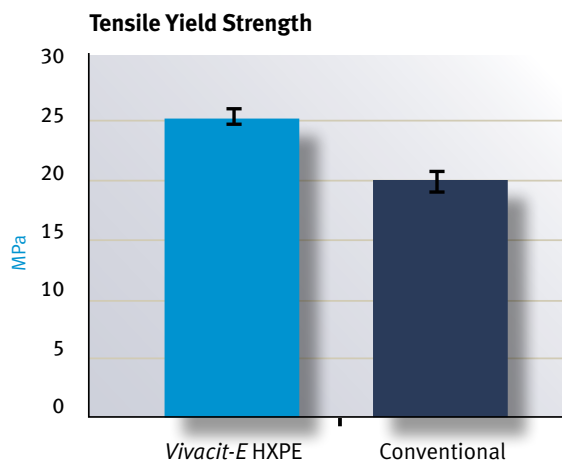
Ultra-Low Wear

96% Reduction in Wear Compared to Conventional Polyethylene⁹

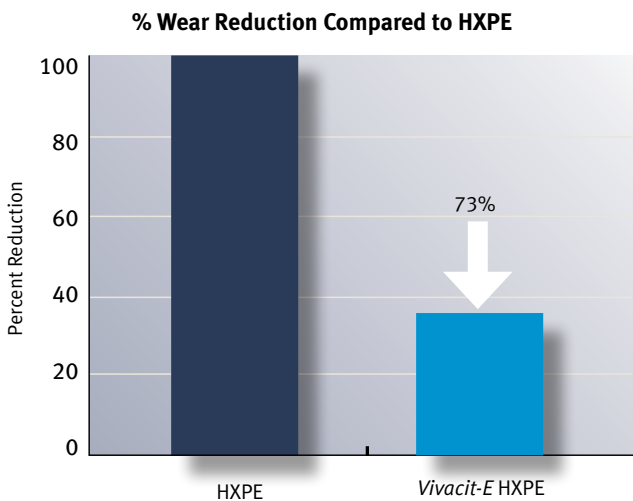


Improved Strength

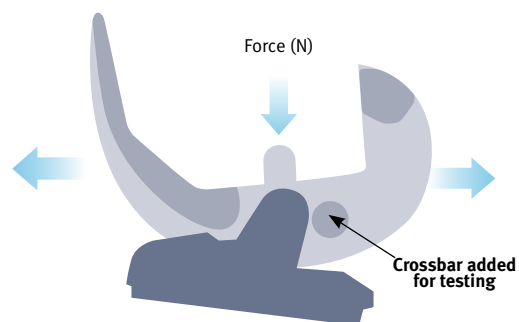
Improved Strength Over Conventional Polyethylene^{3,4}



73% Reduction in Wear Compared to Re-Melted Highly Crosslinked Polyethylene (HXPE)⁹



10% Improvement in Spine Fatigue Strength Compared to Conventional Polyethylene¹⁰



References:

1. Zimmer ZRR_WA_2409_11
2. Vivacit-E Vitamin E Highly Crosslinked Polyethylene Long-term Performance for High Demand Patients
3. Zimmer ZRR_WA_2401_11
4. Zimmer TM 1140.98
5. Zimmer ZRR_WA_2580_12
6. Oral, E. et, al. Crosslinked Vitamin E Blended UHMWPE with Improved Grafting and Wear Resistance. Poster No. 1181. ORS 2011 Meeting.
7. Oral, E. et, al. Trace amounts of grafted vitamin E protect UHMWPE against squalene-initiated oxidation. Poster No. 1295. ORS 2011 Meeting
8. Rowell, S. et, al. Detection of Vitamin E in Irradiated UHMWPE by UV Visible Spectroscopy. Poster No. 1186. ORS 2011 Meeting.
9. Zimmer ZRR_WA_2537_12
10. Zimmer ZRR_WA_2551_12

Laboratory testing not necessarily indicative of clinical performance.

Contact your Zimmer representative or visit us at www.zimmer.com

