



CATEGORY
LUBRICANTS



ZFC LUBRICANT REPORT

2024
LUBRICANT
TEST DATA

5

SILCA
LUBRICANTS

45+

LUBRICANTS
TESTED

1ST

PLACE

HOT WAX/WET LUBE
CATEGORIES

Secret Chain Blend Hot Wax

LONGEST-LASTING CHAIN PROTECTION: **Secret Chain Blend Hot Wax** keeps chain wear to a minimum, showing the best results in clean and dry conditions compared to other products.

Secret Chain Blend Hot Wax

TOUGH IN BAD CONDITIONS: Even in wet and dirty conditions, **Secret Chain Blend Hot Wax** outperformed competitors, protecting your chain better than most.

Secret Chain Blend Hot Wax

RELIABLE EVERYWHERE: No matter the situation—clean, dry, wet, or dirty—**Secret Chain Blend Hot Wax** stays consistent in keeping your chain in great shape.

 Zero Friction
Cycling

Zero Friction Cycling (ZFC) sets itself apart through its dedication to independent, data-driven testing. By conducting rigorous in-house testing, extensive real-world trials, and leveraging results from the world's most accurate and unbiased test labs, ZFC delivers insights that cyclists can trust. Every recommendation is grounded in transparent, science-backed analysis, ensuring riders benefit from proven performance gains, efficiency improvements, and reliable expertise—free from marketing influence.

Friction / wear test - cumulative wear - Main test protocol

WAX / Wax DRIP / DRIP - WET / GREASE

| | Block 1 - No Contamination | Block 2 - Dry Cont. | Block 3 - No Cont. | Block 4 - Wet cont. | Block 5 - No Cont. | Block 6 - Extreme Cont. |
|---------------------------------------|--|---------------------|--------------------|---------------------|--------------------|-------------------------|
| Silca Hot Melt | 0.3% | 2.0% | 6.6% | 14.6% | 19.0% | 27.4% |
| Mspeedwax New Formula | 0.0% | 1.1% | 1.7% | 10.8% | 11.9% | 31.6% |
| Rex Black Diamond Wax - 11+1 mix | 0.0% | 1.4% | 2.3% | 6.9% | 8.9% | 44.6% |
| Rex Black Diamond Wax - 4+1 Mix | 0.0% | 0.3% | 1.2% | 19.5% | 21.4% | 49.4% |
| Silca Hot wax X | 0.0% | 0.0% | 0.0% | 23.1% | 28.2% | 60.2% |
| Private Immersive wax (3) | 0.6% | 2.9% | 3.2% | 34.9% | 38.1% | 75.5% |
| Candle wax | 5.3% | 14.8% | 20.3% | 34.4% | 40.2% | 77.6% |
| Effetto Mariposa Flower power wax | 2.3% | 4.6% | 4.6% | 36.6% | 48.0% | 80.0% |
| Private Immersive wax | 0.0% | 5.7% | 6.0% | 40% | 46.0% | 83.4% |
| Private Immersive wax (2) | 0.9% | 2.0% | 2.9% | 39.7% | 45.0% | 87.1% |
| Ceramic Spd UFO Drip New Formula | 2.3% | 5.7% | 6.3% | 38.6% | 55.6% | 92.2% |
| Molten Speed Wax Original Formula | 0.0% | 12.0% | 12.0% | 20.0% | 20.0% | 98.0% |
| Tru Tension Tungsten Race - (*D.A) | 5.4% | 7.4% | 9.7% | 48.0% | 78.0% | 117.0% |
| Tru Tension Tungsten All Weather | 14.0% | 24.0% | 36.0% | 67.0% | 85.0% | 117.0% |
| Session S-Wax | 14.6% | 20.3% | 25.4% | 58.0% | 84.6% | 121.1% |
| Silca Super Secret Drip | 2.9% | 7.5% | 7.5% | 44.4% | 73.4% | 133.0% |
| Silca Synergetic | 0.0% | 18.3% | 42.6% | 70.0% | 91.7% | 147.0% |
| Ceramic Speed Wet Conditions | 12.3% | 28.3% | 44.9% | 86.0% | 109.7% | 151.5% |
| Rex Black Diamond | 2.3% | 13.4% | 30.0% | 73% | 97.1% | 161.20% |
| Smooove | 19.1% | 36.6% | 38.6% | 87.3% | 118.0% | 163.7% |
| Allied GRAX | 22.0% | 40.3% | 59.1% | 101.0% | 127.1% | 169.8% |
| Private wax drip (1) | 5.1% | 9.7% | 10.0% | 69.1% | 112.1% | 171.9% |
| Rex Domestique | 5.1% | 33.7% | 48.8% | 93% | 107.6% | 173.2% |
| Squirt | 19.1% | 39.0% | 61.0% | 109.4% | 140.5% | 190.4% |
| Nix Frix Shun | 12.6% | 40.0% | 54.3% | 82.9% | 155.0% | 197.1% |
| Boeshield T9 - Aerosol | 11.1% | 43.4% | 65.7% | 113.1% | 135.4% | 206.5% |
| Revolubes | 4.0% | 22.3% | 39.7% | 101.4% | 118.8% | 211.8% |
| Silca Synerg-E | 2.0% | 9.7% | 29.4% | 102.9% | 122.5% | 232.6% |
| Rock N Roll Gold | 8.9% | 37.9% | 57.9% | 122.0% | 142.9% | 240.4% |
| Finish Line Dry | 14.9% | 50.0% | 76.9% | 131.2% | 175.5% | 257.0% |
| Wend Wax test 2 (dissolved in) | 35.7% | 69.4% | 98.0% | 39.9% | 205.9% | 270.6% |
| Cycle Star Gold | 22.3% | 53.1% | 98.3% | 155.3% | 200.4% | 285.9% |
| Singer general purpose (\$6.95) | 9.1% | 47.4% | 87.4% | 152% | 191.8% | 288.4% |
| Private test - wet lubricant (1) | 14.9% | 58.9% | 89.8% | 160% | 190.8% | 296.0% |
| Wolf tooth wt-1 on Factory grease | 17.7% | 54.8% | 103.1% | 166.3% | 214.6% | 309.4% |
| AB Graphene Wax | 22.0% | 60.3% | 85.1% | 188.7% | 213.7% | 317.3% |
| Wolf tooth wt-1 | 16.9% | 69.7% | 123.7% | 202.8% | 256.8% | 337.8% |
| Dumonde Tech Pro X-Lite | 16.0% | 84.9% | 106.6% | 201.6% | 223.3% | 365.8% |
| Muc Off C3 Ceramic Dry | 10.6% | 72.3% | 124.6% | 212.4% | 264.7% | 396.4% |
| Private test wet lubricant (2) | 11.1% | 36.6% | 92.9% | 194.6% | 250.8% | 403.4% |
| White Lightning Epic Ride | 22.9% | 56.5% | 160.9% | 200.7% | 325.0% | 414.7% |
| Finish Line Wet (green bottle) | 15.1% | 106.3% | 183.0% | 300% | 377.0% | 552.8% |
| Prestacycle One | 7.9% | 102.9% | 1.0% | 298.6% | 394.8% | 554.1% |
| Muc Off Ludicrous AF | 8.9% | 89.6% | 183.0% | 304.7% | 385.4% | 567.0% |
| Muc Off Hydro Dynamic | 27.6% | 126.6% | 211.0% | 336.1% | 420.7% | 608.2% |
| Airolube | 9.7% | 108.6% | 166.6% | 331.7% | 389.7% | 637.4% |
| Muc Off Nano Lube | 27.7% | 145.1% | 158.8% | 373.6% | 466.0% | 666.7% |
| *D.A = Re lube applications doubled | Red = extrapolated data as test stopped before testing this block. | | | | | |
| *E.A = Extended application intervals | See Below Wear by block data table for current extrapolations. | | | | | |

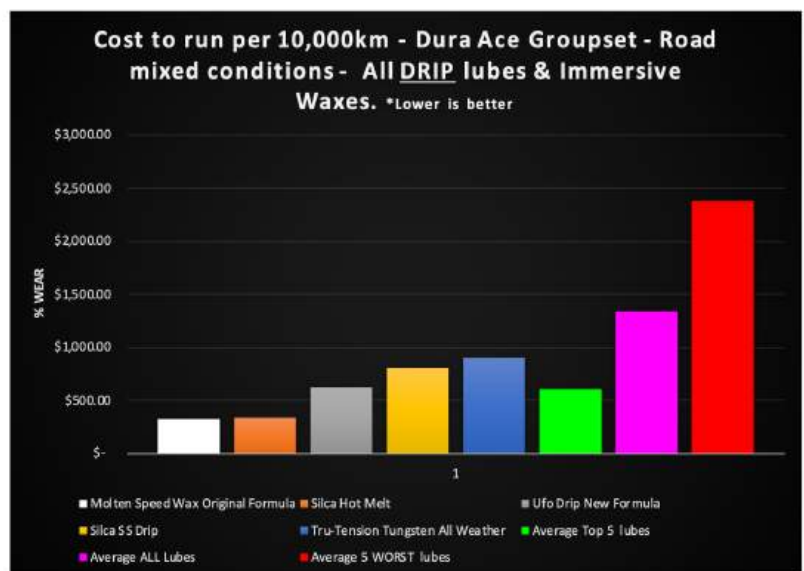
What's in Your Lubricant?



Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that include perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). PFAS have been manufactured and used in a variety of industries around the globe, including in the United States since the 1940s. PFOA and PFOS have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body - meaning they don't break down and they can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects. This is a concern in fire and emergency services because fluorine based Class B foams contain PFAS.



Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors. VOCs are emitted by a wide array of products numbering in the thousands.





Lowest Cumulative Wear Across Test Conditions:

The Secret Chain Blend Hot Wax consistently outperformed other wax-based and oil-based lubricants, showing minimal cumulative wear percentages across all test blocks, including extreme contamination. It performed particularly well in the "No Contamination" and "Dry Contamination" blocks, achieving wear rates of 0.3% and 2.0%, respectively, among the lowest in the test.

Durability in Wet & Extreme Conditions:

Even in wet and extremely contaminated environments (Block 4 and Block 6), Secret Chain Blend Hot Wax demonstrated superior wear resistance (14.6% and 27.4%), significantly better than most competitors.

Consistency Across Blocks:

SILCA products demonstrated lower variability in wear across all blocks, indicating consistent performance regardless of environmental conditions.

Best Overall Wear Performance in the Wax Category:

Compared to other wax-based lubricants like Candle Wax, Effetto Mariposa, and private immersive waxes, SILCA Hot Melt had the best cumulative wear performance, proving its reliability for riders seeking durability and efficiency.

Performance Validation Against Wet Lubricants:

Wet lubricants like Muc Off Nano Lube and Finish Line Wet showed exponentially higher wear percentages (up to 666.7%), highlighting the long-term cost-effectiveness and reliability of SILCA's wax-based systems.

These data points emphasize that SILCA's products not only reduce wear but also perform exceptionally well under various environmental conditions, making them a premium choice for customers who value drivetrain longevity and efficiency.