

Flowerpower Wax is the highest performing drip chain lubricant, confirmed by independent tests!

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Last year, when we launched Flowerpower Wax, our chain lubricant based on natural waxes and without dangerous additives, we knew we had developed an innovative eco-friendly product which was also highly reliable, given the good reports in the field.

To have objective and measurable values, though, an instrumental test by an external laboratory was necessary. For this reason **we turned to Zero Friction Cycling in Australia, the absolute authority in the evaluation of bicycle chain lubricants**, and we submitted Flowerpower Wax to their long and severe testing.

What is the verdict of the test? Flowerpower Wax is the highest performing drip chain lubricant!

1. it guarantees the MINIMUM CHAIN WEAR of all the drip lubricants tested;
2. it is among the few lubricants to exceed 6000 km of test, without even complete wear of the chain;
3. it offers the MINIMUM COST of use of all the drip lubricants tested;
4. it guarantees HIGH mileage with a single application.

Read below to find all the details of Zero Friction Cycling approach and the test itself.

Zero Friction Cycling: where the "best" lubricants go to die

The tests at Zero Friction Cycling (ZFC) are aimed at measuring:

- if the lubricant properly penetrates inside the chain links;
- the resistance of the lubricant to dry (dust, sand) or wet (mud) contamination;
- the ability of the lubricant to dispose of the various contaminations through self-cleaning;
- the performance of the lubricant in case of extreme contamination (abundant mud).

The full evaluation takes several months and follows a strict protocol of **six blocks of 1000 km each**, a real torture for chains that allows to simulate in a repeatable and controlled way the wear rate of chains in real conditions.

The elongation of the chain is monitored during the test, with an accuracy of 0.01 mm. **As soon as the chain reaches a total elongation of 0.50 mm compared to the initial measurement, this is considered "100% of consumption" and the test is stopped** (with this

value of elongation the chain has to be replaced, as it becomes harmful to chainrings and sprockets).

The test machine is a home-trainer modified for the need, where a motor applies a constant power of 250 Watts at 100 pedal revolutions per minute.

Over the six blocks of test, the ability of the sealant to reduce the wear rate of the chain is checked in the following conditions:

1. **no contamination** (block 1, 1000 km);
2. **dry contamination**, which involves 5 grams of sand applied dry on the chain (block 2, 1000 km);
3. **self-cleaning capacity of the lubricant after dry contamination**, no additional contamination added (block 3, 1000 km);
4. **wet contamination**, with 500 ml of water sprayed on the chain during the test, together with 5 grams of sand (block 4, 1000 km);
5. **self-cleaning capacity of the lubricant after wet contamination**, no additional contamination added (block 5, 1000 km);
6. **extreme contamination**: the chain is first cleaned perfectly, then subjected to 1000 ml of water and 10 grams of sand, simulating pedaling in extreme mud. Few lubricants get to this point, as the chain often reaches 100% wear during the previous blocks (block 6, 1000 km).

How did Flowerpower Wax do? In two words: very well.

Zero Friction Cycling		DRIP WAX / DRIP OIL							
	Block 1 - No Contamination	Block 2 - Dry Cont.	Block 3 - No Cont.	Block 4 - Wet cont.	Block 5 - No Cont.	Block 6 - Extreme Cont.	Extrapolated chain lifespan - blocks 1-5	Extrapolated wear based on block 1 only	
Effetto Mariposa Flower power wax	2,3%	4,6%	4,6%	36,6%	48,0%	80,0%	10.416	25.000	
Ceramic Spd UFO Drip New Formula	2,3%	5,7%	6,3%	38,6%	55,6%	92,2%	8.992	25.000	
Silca Drip Batch 2	2,9%	7,5%	7,5%	44,4%	73,4%	133,0%	6.811	25.000	
Tru Tension Tungsten Race - ("D.A)	5,4%	7,4%	9,7%	48,0%	78,0%		6.410	18.519	
Session S-Wax	14,6%	20,3%	25,4%	58,0%					
Tru Tension Tungsten All Weather	14,0%	24,0%	36,0%	67,0%	85,0%	117,0%	5.882	7.143	
Silca Synergetic	0,0%	18,3%	42,6%	70,0%	91,7%	147,0%	5.452	25.000	
Rex Black Diamond	2,3%	13,4%	30,0%	73%	97,1%		5.154	25.000	
Nix Frix Shun	12,6%	40,0%	54,3%	82,9%	155,0%		3.907	7.937	
Smooove	19,1%	36,6%	38,6%	87,3%	118,0%		4.423	5.235	
Rex Domestique	5,1%	33,7%	48,8%	93%			4.301	19.607	
Allied GRAX	22,0%	40,3%	59,1%	101,0%			3.960	4.545	
Revolubes	4,0%	22,3%	39,7%	101,4%	120,0%		4.166	25.000	
Squirt	19,1%	39,0%	61,0%	109,4%			3.670	5.235	
Rock N Roll Gold	8,9%	37,9%	57,9%	122,0%			3.460	11.235	
Muc Off Ludicrous AF	8,9%	89,6%					2.320	8.900	
Wolf tooth wt-1	16,9%	69,7%	123,7%						
Cycle Star Gold	22,3%	53,1%	98,3%				3.052	4.484	
White Lightning Epic Ride	22,9%	56,5%	160,7%				2.249	4.366	
Muc Off Hydro Dynamic	27,6%	126,6%					1.580	3.623	
Muc Off Nano Lube	37,7%	145,4%					1.375	2.652	

In block 1, with only 2.3% of elongation, **Flowerpower Wax** immediately placed itself at the **top of the ranking**, on a par with the best products.

Starting with block 2 (dry contamination), **Flowerpower Wax** left everyone behind.

Not only did it pass all six blocks, but **it finished block 6 with an overall elongation of 80%**, without the chain being completely worn.

Find more data and detailed explanations here: <https://zerofrictioncycling.com.au/lubetesting/>

How many kilometers can you travel with a single application?

The reduced elongation in this severe test results in **low wear and consequent long chain life**. We decided to have also the single application longevity evaluated.

Once again Flowerpower Wax proved to be at the top. By reporting the laboratory values to the kilometers that can be traveled in real life use, we have:

Dry / road conditions: up to 650 km with a single application of Flowerpower Wax.

Dry / off-road conditions: up to 450 km with a single application of Flowerpower Wax.

Extreme conditions / mud: up to 100 km with a single application of Flowerpower Wax.

Usage costs

We leave this evaluation for last, because it contains some aspects that are not very intuitive, albeit basically elementary. The relationship between the chain wear rate and the purchase price of the lubricant is an important variable, which directly affects the cyclist's cost of using the bicycle.

Assuming a certain mileage, **the number of chains and drivetrain parts that need to be replaced is highly dependent on the effectiveness of the lubricant**.

A lubricant that reduces the consumption of the chain allows you to travel more kilometers before replacing it.

Furthermore, a lubricant that remains effective for many kilometers in a single application, offers a better yield per quantity used.

Combining these two aspects, even a very expensive lubricant that guarantees many kilometers with a single application and extends the life of the chain, could prove to be more convenient than an inexpensive lubricant which must be applied often to avoid premature chain wear.

ZFC also offers an evaluation in these terms, distinguishing between road conditions (mixed dry and wet), dry off-road conditions (with dry contamination, i.e. sand) and wet off-road conditions (with wet contamination, basically abrasive mud).

In the cost for 10,000 km, Flowerpower Wax is the first among the drip lubricants tested, in the three applications, offering the best ratio between price and drivetrain lifespan. This, thanks to the optimal balance between high mileage per single application, effectiveness to reduce chain wear and relative cost.

DRIP LUBRICANTS - Cost to Run per 10,000km - Road roading mixed conditions (based on wear rate data from main 5000km test with dry and wet contamination blocks)								
Ultegra 11spd Components	Total Cost to run Per 10,000km	Lubricant Cost	Number of chains worn	Chains Cost	Number of Cassettes Worn	Cassettes Cost	Chainrings Worn	Chain rings cost
Effetto Mariposa Flower Power wax	\$ 159,35	\$ 29,90	0,98	\$ 49,00	0,49	\$ 53,90	0,16	\$ 34,02
Ceramic Speed UFO Drip New Formula	\$ 237,73	\$ 84,43	1,10	\$ 55,00	0,60	\$ 60,50	0,20	\$ 37,80
Silca Synergetic	\$ 284,97	\$ 32,97	1,80	\$ 90,00	0,90	\$ 99,00	0,30	\$ 63,00
Rex Black Diamond	\$ 288,89	\$ 17,99	1,94	\$ 97,00	0,97	\$ 106,70	0,32	\$ 67,20
Silca SS Drip	\$ 290,92	\$ 80,92	1,50	\$ 75,00	0,75	\$ 82,50	0,25	\$ 52,50
Tru Tension Tungsten All Weather (I.P)	\$ 305,30	\$ 68,00	1,70	\$ 85,00	0,90	\$ 93,50	0,30	\$ 58,80
Smooove (I.P)	\$ 342,10	\$ 25,00	2,26	\$ 113,00	1,13	\$ 124,30	0,40	\$ 79,80
Rex Domestique	\$ 358,40	\$ 35,00	2,32	\$ 116,00	1,20	\$ 127,60	0,38	\$ 79,80
Squirt - (I.P)	\$ 369,45	\$ 18,75	2,50	\$ 125,00	1,25	\$ 137,50	0,42	\$ 88,20
Nix Frix Shun	\$ 378,15	\$ 14,85	2,60	\$ 130,00	1,30	\$ 143,00	0,43	\$ 90,30
Allied Grax	\$ 379,70	\$ 29,00	2,50	\$ 125,00	1,30	\$ 137,50	0,40	\$ 88,20
Revolubes	\$ 381,00	\$ 45,00	2,40	\$ 120,00	1,20	\$ 132,00	0,40	\$ 84,00
Rock N Roll Gold	\$ 471,90	\$ 67,10	2,90	\$ 145,00	1,45	\$ 159,00	0,48	\$ 100,80
Cycle Star Gold	\$ 602,00	\$ 140,00	3,30	\$ 165,00	1,65	\$ 181,50	0,60	\$ 115,50
Tru Tension Tungsten Race (D.A)	\$ 630,84	\$ 399,84	1,60	\$ 80,00	0,80	\$ 88,00	0,30	\$ 63,00
White Lightning Epic Ride	\$ 735,40	\$ 118,00	4,40	\$ 220,00	2,20	\$ 242,00	0,74	\$ 155,40
Muc Off Hydro Dynamic	\$ 799,05	\$ 99,75	5,00	\$ 250,00	2,50	\$ 275,00	0,80	\$ 174,30
Muc Off Ludicrous AF	\$ 898,60	\$ 297,00	4,30	\$ 215,00	2,10	\$ 235,00	0,70	\$ 151,00
Muc Off Nano Lube	\$ 1.222,70	\$ 200,00	7,30	\$ 365,00	3,70	\$ 401,50	1,20	\$ 256,20

DRIP LUBRICANTS - Cost to Run per 10,000km - Gravel / MTB / CX - Dry dusty conditions - based on wear rate data from dry contamination test block

GRX 810 Components - Dry gravel / Mtb / Cx	Total Cost Per 10,000km	Lubricant Cost	Number of chains worn	Chains Cost	Number of Cassettes Worn	Cassettes Cost	Chainrings Worn	Chain rings cost
Effetto Mariposa Flower Power wax	\$ 119,77	\$ 33,64	0,6	\$ 28,75	0,3	\$ 37,38	0,1	\$ 20,00
Silca SS Drip	\$ 180,47	\$ 91,72	0,6	\$ 31,25	0,3	\$ 32,50	0,1	\$ 25,00
Ceramic Speed UFO Drip New Formula	\$ 226,65	\$ 115,40	0,8	\$ 37,50	0,4	\$ 48,75	0,1	\$ 25,00
Rex Black Diamond	\$ 228,48	\$ 26,98	1,4	\$ 68,75	0,7	\$ 87,75	0,2	\$ 45,00
Tru Tension Tungsten All Weather	\$ 289,75	\$ 96,00	1,3	\$ 62,50	0,6	\$ 81,25	0,3	\$ 50,00
Smooove	\$ 362,50	\$ 35,00	2,1	\$ 106,25	1,1	\$ 146,25	0,4	\$ 75,00
Silca Synergetic	\$ 366,72	\$ 32,97	2,3	\$ 112,50	1,1	\$ 146,25	0,4	\$ 75,00
Allied Grax	\$ 377,25	\$ 43,50	2,3	\$ 112,50	1,1	\$ 146,50	0,4	\$ 75,00
Squirt	\$ 443,25	\$ 27,00	2,2	\$ 137,50	1,4	\$ 178,75	0,5	\$ 100,00
Nix Frix Shun	\$ 541,05	\$ 19,80	3,4	\$ 168,75	1,8	\$ 227,50	0,6	\$ 125,00
Rock N Roll Gold	\$ 635,82	\$ 93,94	3,6	\$ 181,25	1,8	\$ 235,63	0,6	\$ 125,00
Tru Tension Tungsten Race (D.A)	\$ 642,28	\$ 559,78	0,5	\$ 25,00	0,3	\$ 32,50	0,1	\$ 25,00
Cycle Star Gold	\$ 758,50	\$ 196,00	4,0	\$ 193,75	1,9	\$ 243,75	0,6	\$ 125,00
Rex Domestique	\$ 797,50	\$ 52,50	5,0	\$ 250,00	2,5	\$ 325,00	0,9	\$ 170,00
Revolubes	\$ 812,50	\$ 67,50	5,0	\$ 250,00	2,5	\$ 325,00	0,9	\$ 170,00
White Lightning Epic Ride	\$ 1.202,25	\$ 166,00	7,1	\$ 356,25	3,5	\$ 455,00	1,1	\$ 225,00
Muc Off Ludicrous AF (Extrapolated data)	\$ 1.898,00	\$ 445,50	9,9	\$ 493,75	4,9	\$ 633,75	1,6	\$ 325,00
Muc Off Hydro Dynamic (Extrapolated data)	\$ 1.955,00	\$ 140,00	12,4	\$ 618,75	6,1	\$ 796,25	2,0	\$ 400,00
Muc Off Nano Lube (Extrapolated data)	\$ 2.282,50	\$ 280,00	13,5	\$ 675,00	6,8	\$ 877,50	2,3	\$ 450,00

DRIP LUBRICANTS - Cost to Run per 10,000km - Gravel / MTB / CX - Wet abrasive conditions - based on wear rate data from Extreme Contamination test block

GRX 810 Components - Extreme Conditions (full mud cx etc)	Total Cost Per 10,000km	Lubricant Cost	Number of chains	Chains Cost	Number of Cassettes	Cassettes Cost	Chainrings Worn	Chain rings cost
Effetto Mariposa Flower Power wax	\$ 859,64	\$ 33,64	5,6	\$ 280,00	2,8	\$ 364,00	0,91	\$ 182,00
Tru Tension Tungsten All Weather	\$ 915,00	\$ 96,00	5,6	\$ 280,00	2,8	\$ 364,00	0,90	\$ 175,00
Ceramic Speed UFO Drip New Formula	\$ 1.058,65	\$ 115,40	6,5	\$ 323,75	3,2	\$ 409,50	1,10	\$ 210,00
Silca Synergetic	\$ 1.482,75	\$ 49,50	9,6	\$ 481,25	4,9	\$ 637,00	1,60	\$ 315,00
Nix Frix Shun (Extrapolated Data)	\$ 1.528,30	\$ 19,80	10,0	\$ 498,75	5,1	\$ 659,75	1,80	\$ 350,00
Silca Drip Batch 2	\$ 1.804,97	\$ 91,72	11,6	\$ 577,50	5,8	\$ 750,75	1,90	\$ 385,00
Allied Grax (Extrapolated Data)	\$ 2.224,00	\$ 43,50	14,7	\$ 735,00	7,4	\$ 955,50	2,45	\$ 490,00
Rex Black Diamond	\$ 2.238,63	\$ 26,98	14,9	\$ 745,50	7,5	\$ 969,15	2,49	\$ 497,00
Rex Domestique (Extrapolated Data)	\$ 2.332,43	\$ 53,50	15,3	\$ 764,00	7,6	\$ 994,00	2,56	\$ 511,00
Revolubes	\$ 2.337,43	\$ 67,50	15,3	\$ 764,75	7,6	\$ 994,18	2,56	\$ 511,00
Smooove (Extrapolated Data)	\$ 2.371,25	\$ 35,00	15,8	\$ 787,50	7,9	\$ 1.023,75	2,60	\$ 525,00
Tru Tension Tungsten Race (D.A)	\$ 2.553,03	\$ 559,78	13,5	\$ 673,75	6,7	\$ 864,50	2,30	\$ 455,00
Squirt (Extrapolated Data)	\$ 2.559,25	\$ 27,00	17,2	\$ 857,50	8,6	\$ 1.114,75	2,80	\$ 560,00
Rock N Roll Gold (Extrapolated Data)	\$ 3.479,44	\$ 93,94	22,8	\$ 1.137,50	11,4	\$ 1.478,00	3,90	\$ 770,00
Cycle Star Gold (Extrapolated Data) (Bankrupt?)	\$ 3.626,00	\$ 364,00	21,9	\$ 1.093,75	11,0	\$ 1.433,25	3,70	\$ 735,00
Muc Off Ludicrous AF (Extrapolated Data)	\$ 4.535,25	\$ 445,50	27,7	\$ 1.382,50	13,8	\$ 1.797,25	4,55	\$ 910,00
White Lightning Epic Ride (Extrapolated Data)	\$ 6.667,25	\$ 166,00	43,8	\$ 2.187,50	21,9	\$ 2.843,75	7,40	\$ 1.470,00
Muc Off Hydro Dynamic (Extrapolated Data)	\$ 10.419,00	\$ 140,00	69,3	\$ 3.465,00	34,7	\$ 4.504,00	11,60	\$ 2.310,00
Muc Off Nano Lube (Extrapolated Data)	\$ 10.675,00	\$ 280,00	70,0	\$ 3.500,00	35,0	\$ 4.550,00	11,70	\$ 2.345,00

Flowerpower Wax is available in 100 ml and 500 ml formats.

#nevergameover #flowerpowerwax