HIGH QUALITY NANOTECHNOLOGY CERAMIC COATING FOR ENGINES

Nano technology Ceracoat Ceramic
WORLDWIDE
ORIGINAL SWISS QUALITY

(4-stroke, 2-stroke, fuel, gasoline), GEAR BOX (manual), DIFFERENTIALS, CHAINS, BEARINGS, SHOCK ABSORBERS, HYDRAULIC SYSTEMS. IN GENERAL: ALL KIND OF LUBRICATION

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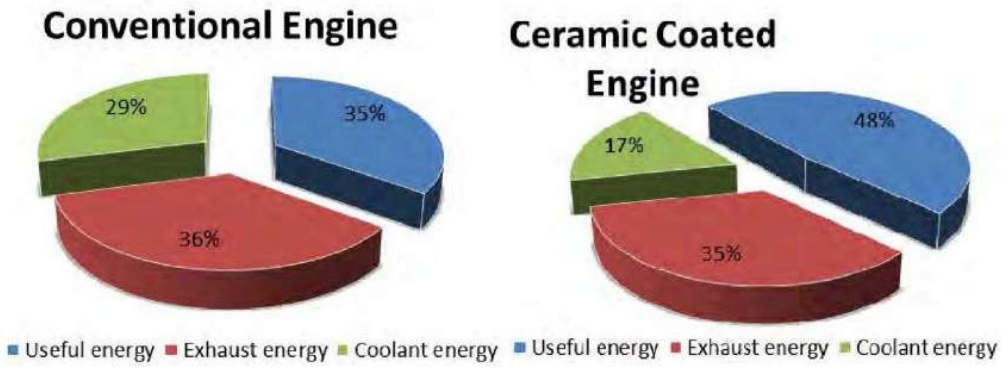
CERACOAT CERAMIC ENGINE CARE



CERACOAT CERAMIC COATING FOR ENGINES:

- Is a coating by solid ceramic particles, to be added to greases, hydraulic-oils, gear-oils, engine-oils, etc. in order to reduce friction and wear in a spectacular way.
- The ceramic solid particles do not build any agglomerates, and do not block filters. The solid polar particles have a disc structure and therefore an extremely good adhesion to the metal surface, building a film-like ceramic layer on the piston rings and the cylinder walls, reducing friction + wear in the engine. No more friction between metal at cold start (no lubrication yet) because of the protectant ceramic film.

EXAMPLES OF USE:

? Engines (cars, trucks, tractors, machines, airplanes, bikes, boats)
? Gears (also for windmills)
? Shock absorbers ? Bearings,
hydraulic systems ? Everywhere
where you have oil and/or grease for lubrication

PRODUCT CHARACTERISTICS:

? Ceramic concentrate based on nanotechnology, foodstuff neutral (inert)
? Ceramic natural material builds a film on the metal parts of the engine
? Ceramic reduces friction, wear, corrosion, temperature, fuel & oil consumption
? No oil change needed to add it – film remains after oil changes

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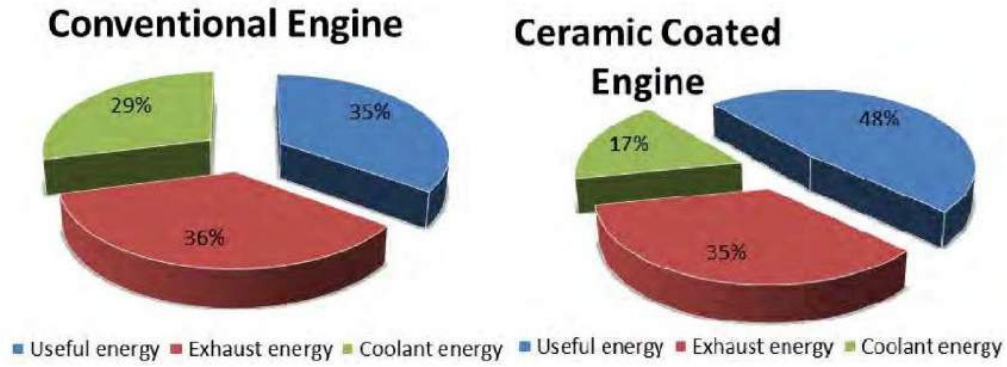

OTHER PROPERTIES:

- Much better friction coefficient than PTFE, any other material or the oil – anti corrosion
- Much higher heat transfer coefficient than PTFE, any other material or the oil
- Works until an operating temperature of 1800 °C (PTFE only 260 °C)
- Reduction of friction means: less wear, consumption, exhaust emission, noise, temperature, vibrations, elimination of the cold start problem of missing lubrication
- Reduction of friction means: more efficiency (more power/torque), longer service intervals, increases engine lifetime – protection during cold starts + lubrication fails

APPLICATION:

Simple do-it-yourself application makes it suitable for end-customers as well:

Just add it to the warm engine oil and immediately drive the car for about 15 minutes

This CERAMIC-coating does quickly adhere to the metal parts of the engine

STORAGE STABILITY: Unopened original containers can be stored for at least 10 years. Shake the bottle when the product was stored a long time before use

CONSUMPTION:

1 bottle for up to 6 liters of engine oil – 1 bottle for about 50 000 km or once a year

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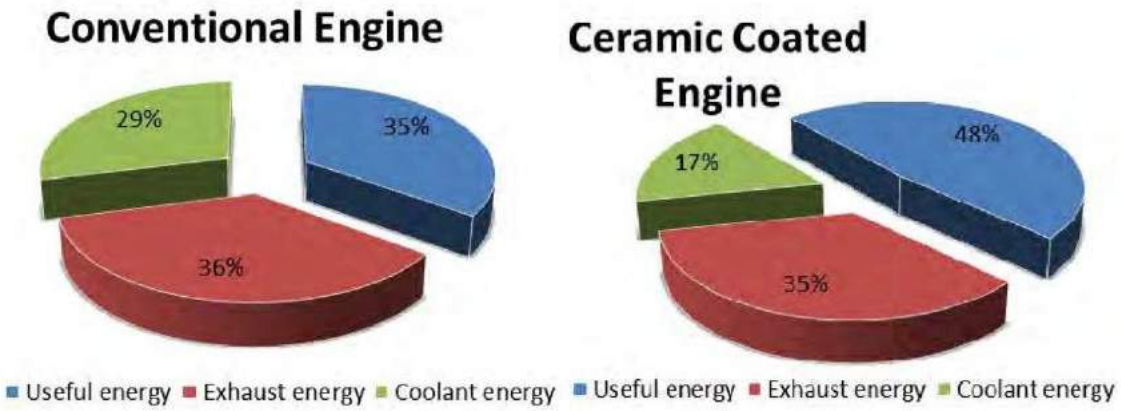

ADVANTAGES COMPARED TO COMPETITIVE PRODUCTS

- Permanence and longevity: The ceramic engine coating is active for about 50 000 km and since it is a coating and not an oil additive, it is still active after oil changes

Many competitive products have to be added after each oil change and do not adhere to the metal parts because they are just oil additives

- Abrasion resistant, temperature resistant

A solid connection from the ceramic material to the metal parts of the engine builds a permanent ceramic film on the metal parts. Abrasion/friction will not affect the ceramic film for about 50 000 km and ceramic is temperature resistant until 1800 °C

Many competitive products are quickly destroyed by friction and temperature (So, the working range of PTFE for example is only about 260°C)

- No chemical product Ceramic is a natural product that people are using all day long in many other fields

Many competitive products are chemicals, and PTFE is transformed in CFC (poison) by heat

IMPORTANT NOTICE:

Our explanations correspond to our current knowledge and experience. The right to make alterations within the framework of technical advances and operational development is reserved. The customer is not released from careful product application. We guarantee the quality of our products in accordance with our general sales conditions as a matter of course. The products are ready-to-use.

TESTING RESULTS:

Summary of test results from **CERACOAT ceramic** at the Universities at Apeldoorn, Ulm and Eindhoven

SUMMARY OF TESTRESULTS WITH CERAMIC engine coatings,

CERACOATceramic - CERAMIC engine coatings have been tested by:

A- ***HTS Auto-Engineering University at Apeldoorn/Netherlands,***
test 1: fuelsavings in cold engines (city drives)
test 2: fuelsavings at roadtests
test 3: fuelsavings with heavily loaded engines
test 4: influence on idling speed, emissionlevels and fuelsavings

testcars: Audi 80, 4 + E, 75 hp, non-regulated catalyst
Mazda 323, GLX, Estate
Mitsubishi, Turbo Tredia

B- ***Fachhochschule at Ulm/Germany,***
test 5: wear on pistonrings

C- ***University of Technology at Eindhoven,***
test 6: friction and wear at heavy loads

Test 1: **fuelsavings in cold engines (city drives)**
Testmethod: This test has been carried out on a dynometer in accordance with the standardmethod FTP-USA. Initial measurements have been carried out with a standard multigrade motoroil. Next measurements have been repeated after addition of the additive.

Result: **fuelsavings about 10%**

Test 2: **fuelsavings at roadtests**
Testmethod: These tests have been done with a.m. cars on highways in accordance with the standardmethod FTP-USA. Each car was driven twice over a fixed distance with a fixed load. First drive without CERACOATceramic, concequently with CERACOATceramic.

Result: **fuelsavings about 6,5%**

Test 3: **fuelsavings with heavily loaded engines**
Testmethod: This test has been carried out with the testcar on the dynamometer in accordance to a testmethod developed by the ANWB together with the Auto-Engineering School. The load is simulated and gives the condition similar to caravan towing. Again is driven first without CERACOAT ceramic, then CERACOAT ceamic is added. Speed is 100 km/h, used caravans Chateau 364 G.PS and Solifer 500 L.

Result: **fuelsavings about 5.8%**

summary testresults CERACOATceramic CERAMIC engine coatings, 12 4 2002, pag.1

Test 4: **influence on idling speed , emissionlevels and fuelsavings**
Testmethod: These tests have been carried out on a dynamometer in accordance with the standardmethod FTP-USA. At the beginning of the test the CO-level and fuel consumption were measured at an idling speed (RPM according to the manufacturers specifications). Subsequently CERACOATceramic was added and the car was driven during one hour. Next the idling speed was determined again and turned down to the initial value. Then the CO-level and fuelconsumption were measured again.

Result: **increase idling speed about 18%**
reduction CO-level about 50%
fuelsaving after turning down the RPM to the initial value about 5%

Test 5: **influence of the used solid materials on the wear pistonrings in running motors**
Testmethod: the pistonrings are impregnated with radio isotopes. The wear has been determined by measuring the reduction of the radio-activity during running of the motor.

Result: **wearreduction about 65%**

Test 6: **influence of solid materials on friction and wear reduction under heavily loaded conditions**
At many institutes a large number of tests have been carried out to study the influence of solid materials like TEFLON/PTFE and CERAMICS during boundary lubrication, a phenomenon that occurs at very heavy and/or bumping loads. These loads exist under the following conditions:
-quick accelerations, especially with a cold engine,
-fast driving on highways,
-driving in the mountains with fully packed cars and caravans,
-stop and go driving,
-on all the machineparts lubricated with oil such as gears in gearboxes, gears in differentials, pistonrings, etc.

Testmethod: Ball/Ring test according to TH/TNO/IRG/OECD to determine the increase of the load before boundary lubrication and/or fretting occur.

Result: **increase of the load 36%**

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C

Measurement of engine power by the University of Arnheim and Measurement of consumption by the University of Eindhoven due to **CERACOAT ceramic** - Physical properties and comparison of **CERAMIC** and PTFE (Teflon*)

Power without Ceracoat ceramic	power With Ceracoat ceramic	Starting power without Ceracoat ceramic	Starting power with Ceracoat ceramic
101,8 kw	106,0 kw	240 Amp	225 Amp
105,6 kw	111,3 kw	330 Amp	285 Amp
214,6 kw	221,5 kw		
320,9 kw	334,8 kw		

Fuel economy w. Ceracoat ceramic	Over 1812 mls - 4,2 %	Over 3556 mls - 4,6 %	Over 4528 mls - 4,9 %
Fuel economy w. Ceracoat ceramic	Normal roads - 10 %	Hill roads - 6,5 %	highway - 5,8 %

Density of ceramic	Ca. 0,9 Kg/L – liquid
Odour + colour of ceramic	Light + white/yellow
Ceramic particles volume	0,1 – 0,5 Micron
Flash point of ceramic	over 230° C
Auto-ignition point of ceramic	over 260° C
Water solubility of ceramic	Insoluble
Viscosity of ceramic	Thick liquid
Temperature of action by ceramic	-20 to ~1800 ° C

Comparison	CERAMIC	PTFE = Teflon* (*registered trade mark from Du Pont de Nemours
Friction coefficient	0,01 – 0,1	0,04 – 0,5
Heat transfer coefficient	40-70 W/K.m	0,24 W/K.m
Hazardous combustion products	None	dangerous CFC
Bonding to metal	Excellent	Non
Polarity	Polar	non polar
Transition	over 1100° C	decomposed after 260° C
Max operating Temperature	~1800 ° C	260° C

* Is a registered Trade Mark of DuPont Company

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CHAMBER OF INDUSTRY AND COMMERCE OF THURGOVIA

ORIGINAL

003044

Seen by the
Chamber of Industry and Commerce
of Thurgovia
8570 Weinfelden (Switzerland), 2014 -09- 24

Hei Elio, (This is just a GREAT result and should open you all markets!)

1. Truck Care.

The temporary results from the truck I mentioned last week show that the fuel consumption has been reduced by 15% (!!!). From 6,2 litres per 10km to 5,3 litres per 10km. The truck also had an oil leakage - about 1 litre per day. After the coating there is no oil leakage at all.

The truck is busy 6 days a week from early morning to late evening with transporting rocks out of a tunnel. The owner says he saves about €600 per week in diesel - €2 400 per month. He also saves a little fortune of oil every month. Attached is a photo of the exact truck.

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All figures for Ceracoat ceramic **Improves considerably**	**Up to**
Engine life	100%
Engine power	~15%
Engine elasticity	
Cold start	
Reduces considerably	**Up to**
FRICTION	35%
Engine wear	84%
Oil temperature + consumption	20%
Fuel comsumption	10%
Exhaust gas emissions	85%
Noise	5dB
Stick-Slip	100%
Stops oilleak	

ND IN ADDITION WITH CERACOAT SPEED ENGINE CLEANER:

Testing results of CERACOAT ceramic Speed Engine Cleaner

Client	First Results Of C1 – C2	Results with Ceracoat ceramic	Reduction of exhaust emission with Ceracoat ceramic Speed Engine Cleaner
Renault	4,51	2,05	55 %
Bosch	3,51	1,55	56 %
Technic Service	2,96	0,94	68 %
Dekra	3,28	0,52	84 %
Opel	4,67	2,10	55 %
Opel	4,39	1,32	70 %
Renault	3,27	0,76	77 %
VAG	3,97	0,71	82 %
Bosch	1,40	0,20	86 %
Norauto	2,80	1,10	61 %
Pansier Brandt	8,49	1,95	77 %
Ferrari	0,80	0,31	63 %
Citroen	4,90	1,00	80 %