

# INSTRUCTIONS FOR USE IN 4 STROKE COMBUSTION ENGINES POWERED BY GASOLINE, CNG, LPG, DIESEL, HYBRID SYSTEM (ANY NUMBER OF CYLINDERS)

**CERAMIZER® is recommended for the reconditioning of four-stroke combustion engines, through regeneration of the surfaces of metal parts which are subjected to friction.**

The proper use of Ceramizer® will result in improvements of the vehicle's performance, increasing the compression level in all cylinders, reducing oil and fuel consumption, reducing vibration and noise, decreasing toxic emissions and extending the engine's life as well as the oil change intervals. Ceramizer® neither clogs filters nor blocks oil channels, as its particles are extremely small in diameter, so they can be freely transferred through filters.

Ceramizer® does not affect oil at all. Its viscosity and composition remain unchanged. Oil is used as a means of delivering active nano particles into the internal parts of the engine prone to friction.

Reconditioning of metal parts through the use of Ceramizer® takes place in normal operating conditions without the need to disassemble them. The ceramic-metal coating (which has unique properties) removes carbon deposit from engine and covers worn down surfaces, leading to restoration of ideal geometry of the surfaces which are subjected to friction.

## INDICATIONS

1. Ceramizer® is suitable for all types of oil and for all types of combustion engines: petrol engines, Diesel with injectors, with direct injection common-rail, with sequential and distributor pumps, for engines powered by gas, turbocharged, those with catalyzers and with lambda probe.
2. Ceramizer® can be used for combustion engines of any machinery and factory units after consulting the Producer.
3. Lowered dose of Ceramizer® than recommended will not provide the expected results.
4. Increased dose doesn't cause any side effects, it only lengthens the process of cermet layer creation.
5. Ceramizer® can be used at every stage of utilization, but at best just after oil exchange.
6. During the whole process of ceramization (1500 km / 900 miles) oil should not be changed. The next oil change should be carried out according to maintenance schedule.
7. Use Ceramizer® as a preventive measure to protect the engine against friction and to extend it's operating life.
8. Lowered dosage of Ceramizer may not deliver the expected results.
9. Increased (e.g. 2 times) dosage of Ceramizers does not give negative results apart from longer time needed to create the metal-ceramic layer.

## DOSAGING

The below presented table specifies the QUANTITY OF CERAMIZERS (quantity of dispensers) required for ceramization of surfaces subjected to friction.

1 dose = one syringe with preparation of a net weight of 4 g.

Engine Oil Capacity (L)	2-8	9-16	17-24	25-33
Mileage: 5 000 - 50 000km or 3 000 – 30 000 miles	½ dose	1 dose	2 doses	3 doses
Mileage: 50 000 – 300 000 km or 30 000 – 180 000 miles	1 dose	2 doses	3 doses	4 doses
Mileage: over 300 000 km or 180 000 miles	2 doses	3 doses	4 doses	5 doses

- For extremely exploited engines (over 85% of expected exploitation reached) increase the dosage of ceramizers by 50%; in case of oil overburn (more than 0,4 l / 1000 km) increase the dosage twofold.
- For engines used in extreme conditions and motorsports use Ceramizer CSX for optimal results.

## INSTRUCTION

1. Warm the engine up to working temperature of 80-90 °C, (e.g. after drive or engine operation at idle gear for at least 10 minutes).
2. Turn the engine off.
3. Turn off the oil filler plug and inject the dispenser(s) content through the filler plug.
4. Put the oil filler plug back on.
5. Start the engine and run on idle gear for 15 minutes.
6. Cover the distance of 200 km/125 miles (not necessarily in one-time) with care, do not

exceed engine rotational speed of 2700 rpm (if the lower rpm is and higher engine's friction than more effective creation of the cermet coating will be achieve).

Note: 200 km / 125 miles can be replaced by by engine operation on idle gear for 4h. On 1 hour on idle gear - corresponds to distance 50 km / 30 miles.






7. Engines which work is specified in moto hours (mth) should be run within 5 mth (not necessarily in one-time) not exceeding speed of 2700 rpm.

After completing the distance of 5 mth, you may drive at any speed. The process of ceramization is completed after 30 mth.

8. Following making 200 km /125 miles or engine operation on idle gear for 4 h, you may drive at any speed. The process of forming of ceramic-metal coating follows during 1500 km/900 miles, but in normal working conditions. Do not change oil within this period!

9. In case of vehicles with high mileage or which consume oil, application of dispensers in 2 phases is recommended. Firstly apply a half of the required dosage of dispensers according to attached user manual, and then after making ca. 500 km/300 miles apply remaining dispensers in the same manner. This procedure ensures optimum ceramic-metal coating of surfaces subjected to friction.

### APPLICATION:

1. WARM UP THE ENGINE 
2. SWITCH OFF THE ENGINE AND APPLY CERAMIZER® TO THE OIL 
3. START THE ENGINE 
4. AVOID DYNAMIC DRIVING FOR THE FIRST 200 km / 125 miles 
5. DO NOT CHANGE OIL BEFORE MAKING THE FIRST 1 500 km / 930 miles 

## NOTES

1. Does not clogg oil channels and / or filters.
2. If any Teflon or molybdenum components have been added to the oil before, we recommend exchanging this oil and to clean the mechanism before applying Ceramizer®. Otherwise its effectiveness will be reduced and the process of cermet creation will be longer.
3. In case of any mechanical damages of the engine e.g. cracked or scorched piston ring, leaky valve, deep scratches on the cylinder etc., they should be repaired before adding Ceramizer®.
4. Perform compression pressure test (before and after ceramization) in order to confirm the efficiency of ceramizer.
5. Ceramizer® does not recondition any places where friction of rubber or plastic with metal parts occurs.
6. In case of engines without automatic adjustment of valve clearance, after Ceramizer® treatment and 1500 km /900 miles, (clatters of valves are heard ) - a valve regulation should be performed.
7. If the engine is equipped with a centrifugal oil filter, it should be cleaned before applying Ceramizer®. In these types of filters molecules of Ceramizer® may settle on the filter, therefore the amount that reaches the friction surfaces is reduced.
8. Ceramizer removes residue from friction surfaces in order to create the metal-ceramic protective layer.
9. Syringes with minor leaks are also valid and fully functional products.
- 10 Ceramizer can be used in combustion engines of industrial machines after consulting the producer first.

## EFFECTIVENESS

Provides protection against wear and tear for minimum of 70 000 km/43 000 miles. Ceramizer® can be used again after this mileage.

## RESEARCH

This product is safe and produced in accordance with the EU norm.

Effectiveness confirmed by tests.

Store at a temperature below +40 °C. If the storage temperature exceeds 40° C the product can sedimentate. In such case product should be shaken and cooled to a temperature below 40° C in order to make it ready to use.

Particle filter is a metal box filled with metal or ceramic fibers on which soot particles are being deposited. These particles burn out in certain operating conditions of exploiting the vehicle.

Ceramizer does not change the rheological parameters of the oil, it does not generate soot particles, sulphated ash, phosphorus and sulfur, therefore it does not affect the work of the DPF and can be safely used in engines with DPF.

Does not contain either molybdenum or Teflon.

Keep away from children.

VALID TILL : 31.12.2024

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**PRODUCT MADE IN POLAND**