

Metaltec Protector
METALTEC®
Technology Metal Conditioner



MILITARY TECHNOLOGY
HI-TECH ANTI-FRICTION
AUTOMATIC TRANSMISSION
MANUAL TRANSMISSION
GEARBOXES-DIFFERENTIALS
TREATMENT

METAL CONDITIONER - METALTEC-1® general characteristic:

METAL CONDITIONER - METALTEC-1® is not a traditional additive to oil. METALTEC-1® is a 100% synthetic liquid, which is free of any solid bodies such as additives based on Teflon (PTFE), copper spherules or molecules of lead, etc. This is why there is no risk of clogging filters and lubricating passages, and neither are there any problems of heat removal. It is a mean for upgrading best-quality metals, which do not change their properties. It acts on the basis of synthetic derivatives of hydrocarbons and protects metals by means of a permanent synthetic molecular bond containing corrosion inhibitor. It features a large molecular weight, high chemical and thermal stability, does not belong to any group of dangerous products, is free of harmful components and solvents with low molecular stability, and reduces oxidation ability of metals.

METAL CONDITIONER has found wide applications in motor sport, car-making industry, transport by air, rail and road, and other industries (developed countries have been using it for over 10 years in gearboxes, hydraulic systems, machining operations, refrigerating and other compressors, air-conditioning devices, bearing systems and other plant and equipment). It is designed for four-stroke (double-stroke) petrol engines, diesel engines, gearboxes, axle transmissions, and other systems. Its application does not require any special conditions.

METAL CONDITIONER - METALTEC-1® can be used in new and rather old engines, including other mechanisms, without any regard to the degree of their wear and tear.

METAL CONDITIONER is used e.g. in or by General Motors, TGV (French express trains), Mercedes Benz, Caterpillar DELTA Alr. from foreign companies.

METAL CONDITIONER - METALTEC-1® is bound in a molecular way to protected friction surface areas and forms a micro-molecular protective layer on all rotary and friction walls. Mixed with oil it forms a permanent and resistant micro-molecular lubricating layer, which is high in strength and sliding properties, resists to high temperatures and considerable mechanical load, and prevents dry friction (under cold conditions).

Owing to circulation of oil charges, METALTEC-1® enters sliding and friction surfaces to immediately create a micro-molecular protective inner structure and an outer protective film. METALTEC-1® is compatible with crude oil, all synthetic and mineral oils, hydraulic fluids, permanent and graphite greases. METAL CONDITIONER - METALTEC-1® works right after it has been applied, affecting directly metal at a molecular level.

Note:

METAL CONDITIONER - METALTEC-1® is not oil!

If you want to check the product for authenticity yourself, pour a small amount of the product into pure water. METALTEC-1® will settle at the bottom due to its specific weight, which is higher than that of water. In contrast to this, any oil poured in water remains (floats) on the water level.

METAL CONDITIONER - METALTEC-1® general instructions for application:

METAL CONDITIONER - METALTEC-1® is compatible with crude oil, petrol, all transmission oils (both synthetic and mineral), hydraulic fluids, permanent greases (e.g. graphite grease).

TECHNOLOGY - industrial use - general instructions:

- **CRANKCASE:** add 30 - 60 ml per 1 litre of oil every 300 hours. Older machines or extreme conditions require that 60 ml per 1 litre of oil should be added every 300 hours.
- **GEARBOXES, INSULATED SETS:** add 30-60 ml per 1 litre of oil in engine every 1000 hours. Older machines or extreme conditions require that 60 ml per 1 litre of oil should be added in insulated sets 500 hours.

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- **COMPRESSORS:** 30-60 ml per 1 litre to piston, rotary, refrigerating and air-conditioning sets in 1000 hours.
- **HYDRAULIC SYSTEMS:** add 250 ml per every 22 litres of hydraulic fluid every 1000 hours of operation.
(Note: 11.36 g of METALTECu-1° per 1 litre of hydraulic fluid = 250 ml of METALTECu-1° per 22 litres.)
- **MACHINING OF METAL:** apply a thin layer to metal surfaces when cutting threads, drawing, boring, turning, pressing, and milling.
- **ROLLER AND BALL BEARINGS:** dip clean bearings in METALTEC-1° during assembly. Mix METALTEC-1° lightly into lubricant (60 ml/1 kg) and apply it into the bearing bush according to the manufacturer's instructions.
- **APPLICATION IN WORKSHOPS:** excellent lubricant for pneumatic systems, valves, chains, conveyors, all high-speed shafts, electric motor bearings, heaters and blowers.
- **LUBRICATING OIL FOR ASSEMBLING:** apply a thin layer to crankshaft bearings, journals, camshafts, supporting (seating) surfaces, and lifter feet.

TECHNOLOGY AUTO – MOTO:

General instructions for possible applications of METALTEC-1°

„METALTEC-1° reduces friction considerably, extends service life of parts, reduces fuel consumption and, what is of most interest to the driver, increases the output of engine “.

Passenger cars:

- Temperature of engine and the oil you mix METALTEC-1° with, is not important.
- Dosing: 50 ml per 1 litre of oil on average
- The figures below are related to European conditions.
- petrol engines 250 ml per whole oil charge of engine
- diesel engines 300 ml per whole oil charge of engine
- automatic transmissions 150 ml per whole oil charge of automatic transmission
- manual gearboxes (for petrol) 150 ml per whole oil charge of gearbox
- manual gearboxes (for diesel) 250 ml per whole oil charge of gearbox
- differentials 150 ml per whole oil charge of differential
- steering boosters 50 ml per whole hydraulic fluid charge of booster
- four-stroke petrol engines 100 ml per 40 litres of petrol - 4 times a year
- diesel engines 150 ml per 40 litres of diesel oil – 4 times a year

Motorcycles – two-stroke engines

- two-stroke engines 50 ml per 1 litre of oil added to and mixed with petrol for two-stroke engines
- motorcycle gearboxes 50 ml per 1 litre of oil charge of motorcycle gearbox,
- METALTEC-1° has no negative effects on plates and operation of clutch in oil charge in motorcycles.

Others:

- METALTEC-1° injected under the rubber sleeve of brake control valves prevents water and other dirt from entering the small piston and, consequently, prevents the small piston from jamming and corroding.
- METALTEC-1° is extraordinarily efficient when poured in gas oil at the amount of 250 ml per fuel tank; this application ensures that all neurgic parts of injection pump and injector will be lubricated. METALTEC-1° should be added again in gas oil after 15 000 km of operation.

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- Use of METALTEC-1® in petrol in cars provided with fuel injection and cars with gas installation is especially recommended. METALTEC-1® should be added again in petrol after 15 000 km of operation.

Trucks and heavy-duty machines:

- For engines with engine piston displacement in excess of 5 litres, 75 ml of METALTEC-1® is multiplied by their engine piston displacement. These engines have rather high volumes of oil charges.

Application in heavy-duty vehicles, mechanisms and machines - an example of calculation:

For engines 8 litres in engine piston displacement and 60 litres in engine oil charge, 75 ml of METALTEC-1® multiplied by the engine piston displacement 8 l is applied to the total engine oil charge volume of 60 l ($75 \times 8 = 600$ ml).

- **Calculation:**

- | | |
|--------------------|--|
| • 8-l engine | 600 ml per whole oil charge (60 litres) |
| • Gearbox | 500 ml per whole oil charge of gearbox |
| • Differential | 250 ml per whole oil charge of differential |
| • Steering booster | 120 ml per whole hydraulic fluid charge of booster |

The reason for the non-linear application of METALTEC-1® is that the product is not any additive designed for oil, but it is a METAL CONDITIONER, which acts on internal metal friction surfaces of the treated systems. The amount depends on the size of metal friction surfaces and not on the volume of oil charges.

METALTEC-1® can be added into engines any time when the oil is replaced, irrespective of the degree of the use of the oil in engine. The specified amounts of METAL CONDITIONER - METALTEC-1® are added into the engine via filling neck. Application of higher amounts than those specified has no negative influences.

For car and motorcycle racing purposes, at least a double dose is used.

When used in four-stroke combustion engines, METALTEC-1® is added every 25 000 km. When used in gearboxes, differentials, steering gears, bearings, journals and other assemblies, it is added about every 50 000 km. Dynamic racing-type driving calls for METALTEC-1® to be added whenever the oil is replaced.

Caution!

Where an oil addition, containing e.g. Teflon (PTFE) or copper or lead, was used in gearbox, final drive box or engine, the oil and filter shall be replaced first and only then METALTEC-1® may be applied, including new oil charges.

METAL CONDITIONER - METALTEC-1® was examined by the Operation Technology Institute, the Motorization Institute and a tribology research laboratory with regard to the following standards and European methods:

1/PN-76/C-04147, 2/ASTM D4172, 3/ASTM D2783, 4/ItE.

Application of METAL CONDITIONER METALTEC-1® to weapons and combat equipment:

- in armed forces
- v police
- in manufacturers of weapons
- in security agencies
- in shooting teams
- in hunting

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METAL CONDITIONER – METALTEC-1® used for firearms:

General instructions:

1. Disassemble the firearm and remove grease, carbon and dirt.
2. Apply METALTEC-1® to inside and outside surfaces of the barrel and all mechanisms (only a very thin layer will suffice to get into surface molecular bonds of material. Where the manufacturer specifies grease to be used for the firearm, mix METALTEC-1® into the grease at the prescribed ration and apply the mixture to specified surfaces treated with METALTEC-1® only before. We do not recommend that grease should be used for Mauser-type and similar breeches, where the grease prevents them from operating reliably under freezing conditions. In hunting, competition and business arms, METALTEC-1® is an equivalent substitute of grease. We recommend that you should consult concrete conditions with us. It is optimal and the most economical carry out the application about 24 hours before the firearm is to be used. It is appropriate to use synthetic (non-absorbing) fabric for the application. During the period above, the firearm may be either disassembled or assembled, as the action of METALTEC-1® surface layer is not disturbed by contact of firearm parts. There is no need to wipe the barrel and mechanisms of the firearm treated in this manner (firearms treated with METALTEC-1® do not need "degreasing"). After firing and heating the firearm, it is necessary to wipe METALTEC-1® out of the firearm, which does not worsen efficiency of METALTEC-1®. We recommend that you should check the firearm by sighting-in.
3. To protect firearms when stored for a long time, apply a thin layer of METALTEC-1® to all inside and outside surfaces, including the barrel and its mechanisms, until after you have cleaned them thoroughly. A very thin layer will be sufficient. We recommend that you should wipe the firearm dry before actual firing – the lubrication effect of METALTEC-1® will not be lost. After firing, wipe the firearm (which is much simpler after previous treatment with METALTEC-1®, because dirt and carbon do not get deposited on METALTEC-1® - the firearm is not attacked by corrosion) and apply a thin layer of METALTEC-1® again.

SAFETY MEASURES:

- Use personal protective equipment – safety glasses, gloves and working clothes – when working with METALTEC-1®.
- Should some parts of your body get contaminated with METALTEC-1®, rinse them with water.
- Get medical attention, if the contaminated parts (skin) become red.

„GUARANTEE PERIOD IS UNLIMITED FOR METALTEC-1®”

Made for the company:

METALTEC-CZ, spol. s.r.o.

Czech Republic

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