

From a .17 caliber rifle cartridge

On the 127th try, inventor Bill Williams seemed to have found what he was looking for — a rifle barrel treatment to prevent "burn-out" from a high-velocity .17 caliber cartridge he had designed. His formula, christened WZ-127, employed the slippery finish of TFE resins to prevent carbon build-up and reduce friction.

It didn't take Williams long to realize that a gun was just a one-time piston engine, operating on heat. He poured some in the crankcase of his Toyota, and found it got increased gas mileage, used less oil, and engine temperatures were lower. The implications of his discovery widening, Williams changed its name to Microlon.

Microlon is widely accepted in Europe, where it has been marketed for years. In aircraft circles as well, Microlon enjoys popular use. Pilots have found it increases their engines' power and provides an extra margin of safety.

As a one-time metal treatment, Microlon's dry lubrication is effective in aircraft, ships, trucks, tractors, cars, motorcycles — any internal combustion engine. In fact, Microlon reduces friction between any mating metal surfaces, such as bearings, bushings, gears, stampings, machining and molding tools. That means cooler, quieter, and more efficient operation in the manufacturing or usage of equipment.

to industrial applications

Typical benefits of applying Microlon

Longer tool life — Tools last longer and perform better when friction isn't constantly wearing them down. You can reduce the manpower it takes to relubricate and replace worn parts by applying Microlon.

Noise reduction — Microlon can dramatically reduce friction in many machines, making them run smoother. A decrease of even a few decibels in each of several machines can produce a significant drop in the overall noise level. OSHA's current emphasis on reducing industrial noise levels makes this benefit especially important.

Heat reduction — Just as friction is the culprit responsible for noise, it also generates heat. Microlon smooths parts contact, so surfaces stay cooler, contributing to longer tool life.

Surface improvement — Eliminate tool marks and tears by reducing the ultimate cause — friction. Microlon gives you a cleaner, smoother finish because it minimizes machine vibrations caused by friction.

Productivity gain — When you apply Microlon as recommended, wear is retarded and parts last longer. That means downtime due to repairs and regular maintenance is reduced, so machines produce longer, and often do better quality work as well. Microlon is compatible with all commonly used petroleum based fuels, lubricants, hydraulic fluids and water-based coolants.

Drilling and reaming operations

Apply Microlon mixed with heavy-duty cutting oil wherever drills create high cutting pressures and temperatures. Industry experimentation to date indicates tool life increases as much as 50-100% with Microlon treatment.

Reaming operations receive similar benefits from Microlon. Improved surface finish, lack of tearing or smearing,

and significant reduction in tool marks left by the reamer can be expected.

Tapping operations

The use of Microlon for tapping can yield tool life increases as much as 300%. Along with better repeatability and consistency, improved thread form and surface finish can also be expected.

Automatic screw machines

Significant increases in tool life, as well as improvement in surface finish and reduction in tool marks, can be achieved by treating with Microlon. A measurable reduction in sound levels is typical.

Milling, turning and broaching operations

Because of the abnormally high pressures involved in turning and milling operations, Microlon should be applied in a flood coolant dilution of a water or oil base. You can expect tool life increases up to 50% and more.

Power and band saw operations

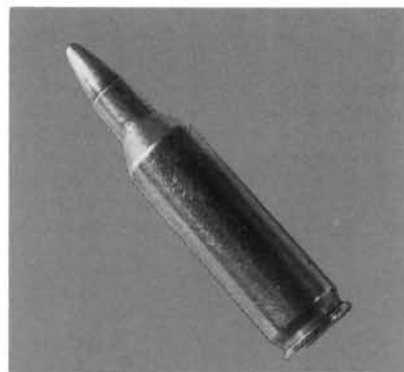
After a thorough cleaning, band saw or hack saw blades can be treated with a dilution of Microlon in the coolant. Increases in blade life up to 400% have been reported by industrial users machining stainless steels and exotic alloys.

Stamping operations

You can apply Microlon in stamping operations by pre-treating the tool and spraying the stock to be formed. By reducing friction it improves the condition of the stamped surface. Tool marks and tears are virtually eliminated, especially in tight corners or blind radius areas.

Mold release

Treating rubber and plastic molds with Microlon makes them last longer before they have to be refurbished. The molded product releases more easily, and the surface is usually smoother, more even.



Assembly operations

The use of Microlon for the assembly of tight-fitting parts (such as hydraulic motors, servo valves, and actuators) can enhance fit-up. Since Microlon greatly reduces friction between close fits, it helps to prevent any seizing and galling problems.

Hydraulic systems

Microlon is compatible with hydraulic oils, so many users have "cleared" sticky valves and servo mechanisms by adding 10% (by volume) to the hydraulic reservoir. Like oils or combustibles, Microlon should not be used with compressed or liquid oxygen.

Bearings and gears

Treating the dynamic components in gearboxes with Microlon gives cooler, smoother operation requiring less energy to power the machinery. Sound levels have been reduced by as much as 10% and service life significantly prolonged.

Internal combustion engines and compressors

Microlon treated engines run smoother and cooler, and so increases gas mileage. Pistons and rotary air compressors run quieter more efficiently with Microlon. Because it cuts engine wear, it extends engine life. Multiply one vehicle's savings by a whole fleet and you'll see how much Microlon can benefit your operation.

Corporate aircraft

When an engine isn't working to overcome friction, more power is transmitted to the propeller. Microlon's special aircraft formulation reduces friction for better fuel economy, as well as an extra margin of safety. Microlon aircraft formulation CL-100 has been accepted by the FAA for use in aircraft engines.