

Fluoramics, Inc.

What is PTFE and why is it important?

Polytetrafluoroethylene (PTFE) is an incredibly versatile fluorocarbon solid that underpins every product manufactured by Fluoramics, Inc. PTFE is hydrophobic (repels water) and non-reactive (unaffected by harsh chemicals), and it has one of the lowest coefficients of friction of any solid. Throughout decades of research, Fluoramics engineers have developed unique ways to suspend and incorporate PTFE into a broad range of products to make sealants more robust, lubricants more slippery, and rust inhibitors more protective and longer lasting.

Sealants

In 1967, the year the company was founded, Fluoramics introduced Formula-8, the world's first PTFE thread sealant. Marketed as an alternative to Teflon tape, this white shear-sensitive paste was designed to sheet out into PTFE strings as a fitting was torqued. This process packed the threads with an impervious seal that could withstand temperatures of -400° to +500° F and could be used in liquid and gaseous oxygen systems — also a world's first. In the 1970s, Fluoramics expanded its sealant business when it introduced LOX-8 Paste, a waterproof thread sealant designed for severe high-pressure, high-temperature applications, and environments where oxygen, powerful oxidizers and caustic chemicals are present. LOX-8 products are ideal for cryogenics, chlorine and ammonia systems, medical equipment, welding gases and waste-water processing.

Lubricants

In the late 1970s, Fluoramics continued to leverage its unique sub-micron PTFE suspension chemistries when it introduced Tufoil Engine Treatment. When added to conventional or synthetic motor oil, Tufoil increases overall lubricity, which decreases engine wear and tear, and increases both horsepower and efficiency. In 1996 and in 1997, the *Guinness Book of World Records* recognized Tufoil as “the world's most efficient lubricant.” Today, Fluoramics has a broad line of Tufoil Technology products with applications in gasoline and diesel engines, industrial settings, robotics, weapons lubrication, plus a variety of household and recreational needs.

Rust Inhibitors

In 2012, Fluoramics once again leveraged its PTFE chemistry's boundary film management to introduce HinderRUST, a rust inhibitor and lubricant that aggressively wets and spreads across all metal surfaces. Solvent-free, HinderRUST, does not evaporate away, but rather forms a lasting, rust-stopping bond on everything from firearms and hand tools, to vehicles, machined parts, and wire cables. Today, Fluoramics markets a full line of HinderRUST products, ranging from short-term rust protection used in manufacturing to long-term rust inhibitors used in marine environments.

Where is Fluoramics Going?

Fluoramics is committed to providing both great products and fabulous service. As it has for over 50 years, Fluoramics will continue to listen to customers and focus on engineering products to solve customer-identified problems.

Chem-8® — as a superior silicone PTFE lubricant, Chem-8 works particularly well for high-pressure gases except fluorine and oxygen. Chem-8 is recommended for aluminum against aluminum surfaces. It is not recommended for alkali, fluorine or HF environments. Chem-8 applications include vacuum systems, instrument threads, mechanical instruments and high vapor pressure applications.

- Waterproof
- Chemically inert
- Effective to 300°F
- Highly dielectric
- Stays put
- Lasts indefinitely
- Resistant to autoclave washout

Fluoramics PTFE Tape — Premium Full-Density PTFE Tapes

Use with Fluoramics' LOX-8® Paste to handle the toughest thread sealing

challenges, including chlorine, fluorine, anhydrous ammonia, urea, hydrogen sulfide, natural gas, argon, helium, oxygen, and propane.

- Oxygen service tested ASTM G72
- MIL-T-27730A
- A-A-58092
- Highly versatile — use this tape for everything

Formula-8® — the original PTFE thread sealant — is a shear-sensitive paste that sheets out into PTFE strings when torqued and delivers exceptional sealing performance on all sizes of threads. Formula-8 is ideal for use in oxygen and fuel systems, hydraulic cylinders, and natural gas applications. NSN 8030-01-527-7193.

- Oxygen-approved and certified by BAM, ASTM G76-82 and G86
- Solvent-free and non-hazardous
- NSF-approved for use in food processing and handling facilities
- Maintains stability in environments of - 400° F to + 500° F

LOX-8® Products — PCTFE/PTFE sealants and greases used where oxygen or harsh chemicals such as chlorine or powerful oxidizers are present. Providing superior performance as a lubricant and sealant, LOX-8 is stable from -400° F to +550° F.

- K-Factor: 0.16 to 0.20, stainless steel
- Nontoxic, flame resistant, solvent-free, and noncorrosive
- Prevents galling in stainless steel fittings
- Ideal for use in corrosive environments (chlorine, urea, ammonia)

LOX-8 Grease is certified for use in gaseous and liquid oxygen. Use LOX-8 Grease in environments where extended service life is important: medical, nuclear and other high-tech fields including chemical processing, industrial gases and other aggressive applications. NSF-approved for use in food processing facilities. Fire resistant. Grease applications include oxygen-service bearings, valves, o-rings, plus pumps and regulators.

- NSF-approved for use in food processing and handling facilities
- Oxygen-tested: ASTM G72-86 and ASTM G86
- Chlorine Institute member tested and accepted (Pamphlet 164)

LOX-8 Paste is a PTFE thread sealant and lubricant that is specifically formulated for use in wet, high-temperature and high-pressure environments as well as in extreme low-temperature cryogenic environments. LOX-8 is approved for use with liquid and gaseous oxygen, and is immune to the effects of acids or bases that destroy other thread sealants. In short, it is the toughest thread sealant you can buy. NSN 8030-00-829-3982. MIL-PRF-27617G.

- Oxygen-tested: ASTM G72-86 and ASTM G86
- NSF-approved for use in food processing and handling facilities
- Chlorine Institute member tested and accepted (Pamphlet 164)

LOX-8 LD* is a PTFE thread sealant formulated for large diameter fittings.

- Lubricant
- Anti-galling
- Non-toxic
- Fire-resistant
- High dielectric
- Solvent-free
- Ideal for use in corrosive environments

*Note: not for use in oxygen systems