

COATING WORLD®

SPECIAL REPORT ON THE USE OF FLUOROPOLYMER COATINGS IN THE INDUSTRIAL WORLD

Metal And Soft Copy Rollers Print Better, Last Longer With New Fluoropolymer Coatings

Are you in Reprographics, Xerographics or Electrophotographics? Are you interested in coating rollers for copier machines, home/commercial printers, laminators or fax machines?

There is a new and growing range of coatings developed by Whitford Corporation to help solve your problems. Marketed under the Xylan® trademark, they are ideal for metal (aluminium and steel) and soft rollers (rubber and silicone rubber) used in the office-products industry both for black-and-white and colour imaging.

Whitford's coatings are born out of the requirements of the processor and end-user (many of whom have participated in the development of these state-of-the-art products).

The Xylan coatings are for both OEM and aftermarket applications. Some of their key characteristics for the Office Products market are:

1. Premium fluoropolymer coatings utilizing PTFE (polytetrafluoroethylene) and/or PFA (perfluoroalkoxy) as lubricants.
2. Maximum abrasion resistance for long-lasting "in-service" life.
3. Excellent release of toner.
4. Electrically conductive/static dissipative systems.
5. Thin-film application to reduce thermal resistance.
6. Available in 2- and 3-layer coating systems.
7. Ultra-smooth, homogeneous surface hardness, non-porous, thin-film coverage to give the best possible



It's remarkable what a thin-film fluoropolymer coating can do to improve the performance of copier rollers.

copy quality consistently.

8. Cost-competitive.
9. Curing by conventional or IR ovens.

For aluminium and steel fuser and pressure rollers

- Xylan 1781: a 3-layer system made of a tough electrically conductive primer and electronically conductive mid-coat topped by an electrically conductive premium release (PTFE) topcoat (Xylan 1783).
 - Xylan 8200: a premium 2-layer system with PTFE as the lubricant.
 - Xylan 1700 Series: a PFA dispersion available in standard film thickness and high-build (up to 2 mils/50 microns) versions.
 - Dykor® 810: PFA powder.
- ### For soft rollers (rubber and silicone rubber)
- Xylan 1225: a 2-component fluoropolymer coating system for silicone rubber fuser and pressure rollers, ideal for higher-durometer silicones. An excellent option to replace expensive "sleeve technologies".
 - Xylan 1631 and Xylan 2000 Series: formulated for rubber rollers

and rubber feed rollers. Xylan 4016 and or 4020 primers are recommended as pretreatments.

For miscellaneous internal/external parts

- Xylan 1010: are non-conductive and electrically conductive coating systems. These premium PTFE-lubricant-based coatings offer superior abrasion resistance, excellent release, outstanding chemical and corrosion resistance, and are suitable for both metal and plastic substrates.

Definitions

- Electrophotography: The process that produces a recording in which light is used to produce a change in electrostatic-charge distribution to form a photographic image; photography in which images are produced by electrical means.
 - Reprography: The process of reproducing, reprinting, or copying graphic material especially by mechanical, photographic, or electronic means; facsimile reproduction (as by photocopying) of graphic matter.
 - Xerography: A dry photographic or photocopying process in which a negative image formed by a resinous powder on an electrically charged plate is electrically transferred to and thermally fixed as positive on a paper or other copying surface; a process for copying graphic matter by the action of light on an electrically charged photoconductive insulating surface in which the latent image is developed with a resinous powder.
- For more information, contact your Whitford representative or Whitford (addresses on back).*

5 Ways A Fluoropolymer Coating Improves The Humble O-Ring

O-rings are one of the small, hidden, but vitally important parts of so many industrial items in our technologically-driven world. They are vital for sealing purposes in everything from automotive engines and filtration systems to domestic water heaters and water

leading to higher maintenance and downtime costs.

O-rings can also be problematic even after they've been installed. By nature they are often exposed to solvents and other chemicals that can degrade the rubber, thereby reducing seal effectiveness.

- Enables the use of lower-cost rubber substrates, since the coating achieves the desired performance without having to rely on expensive substrates.

Solvent-borne and environmentally friendly waterborne coatings are available for use on a wide range of substrates.

Whitford O-ring coatings are designed for application by coating techniques such as quadrant coating or tumble spray. Such techniques are bulk-application, cost-effective techniques that give uniform and consistent coating coverage. They are suitable even for the smallest of O-rings, where direct spray application is time consuming and inefficient.

For more information about Xylan coatings for O-rings, please contact Whitford at the office nearest to you (addresses are below). You can also visit the Whitford website at www.whitfordww.com.



One often-forgotten advantage that Xylan coatings offer is a wide range of beautiful colours, which make the sorting of O-Rings fast, easy and fun.

softeners. Although available in an enormous range of shapes, widths, diameters and materials, they are essentially a ring of round rubber.

O-rings may be useful, but they can also be immensely frustrating. They stick together, are difficult to handle and differentiate from each other, and are often very small and easily lost.

Lubricating the rings for installation is a nightmare. Applying oil or talc onto O-rings is easy enough, but after a short storage period, the lubricant makes its way to the bottom of the container, leaving little on the top O-rings, and a sticky mess at the bottom. There are often health and safety issues with many oil lubricants, as well as environmental concerns on disposal of oil residue, oil-soaked rags, etc. Using oil lubricants also runs the risk of fouling up automatic installation-machine lines,

Coatings to the rescue

Whitford, manufacturer of the world's largest, most complete line of fluoropolymer coatings, has developed a range of Xylan® coatings to solve these problems. Using a fluoropolymer coating on O-rings offers these benefits:

- Reduces the coefficient of friction without using a separate lubricant, thereby easing installation, and helping to stop the O-rings from "sticking" to each other.
- Avoids the need to use a messy lubricant such as oil, talc or silicone.
- Increases the chemical and weather resistance of the O-ring, thus protecting it from degradation by solvents, salt water, etc.
- Colour-codes O-rings, making it easier to differentiate among them. A range of colours from traditional black to bold orange is available.

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