



PROTEK 334I BY INOMETA

**THE CFRP RECOVERING LAYER
FOR RUBBER COVERED ROLLERS.**

PROTEK 334I IS A PROTECTIVE RECOVERING LAYER THAT PRESERVES THE STRUCTURAL AND PERFORMANCE CHARACTERISTICS OF YOUR CARBON FIBER ROLLER CORES.

RUBBER COVERED ROLLER QUALITY STARTS WITH THE CFRP CORE. PROTECT IT.

INOMETA's lightweight, rigid, low-inertia carbon fiber roller cores are engineered and manufactured to deliver long, smooth-running, vibration-free service life that far outlasts their rubber covers. When the worn covers need to be replaced they are mechanically stripped off the CFRP core. Only experienced tool operators are expert enough to remove the worn rubber covers from the cores of your inking and dampening rollers without damaging the structural integrity of the core. INOMETA's PROTEK 334I is a red ceramic-reinforced composite based layer that protects the core from operator error.

Printing and converting processes are evolving faster than ever before. And lightweight CFRP rollers have played a key role in energizing the speed and precision that today's printing press OEMs and end-users alike have come to expect. And so have today's rubber cover materials. Every mainstream printing and converting technology from high speed web offset to high quality gravure to twelve color flexo running multiple substrates has come to depend on both the core and the cover to be optimally tuned. Trouble is, while the carbon fiber core is impervious to the friction, heat, ink, corrosive solvents and other chemicals inherent in today's high speed printing process, the rubber cover must be replaced.

Preserving the value at the core of the roller

Even the highest quality rubber cover must be removed from the CFRP roller core and reapplied several times during the life of the

press. The rubber cover is removed by means of a stripping process. Whenever a CFRP roller core goes through this process, even in the hands of a true craftsman, there is always a danger that the carbon fiber core may be damaged. If for instance, some of the CFRP material is removed during the stripping process, the OEM's specs are compromised. The core's rigidity and vibration dampening qualities may suffer. The cores' concentricity and balance profiles may be altered. Even the slightest imbalance or inaccuracy can lead to a considerable deterioration of print quality.

What's the best solution?

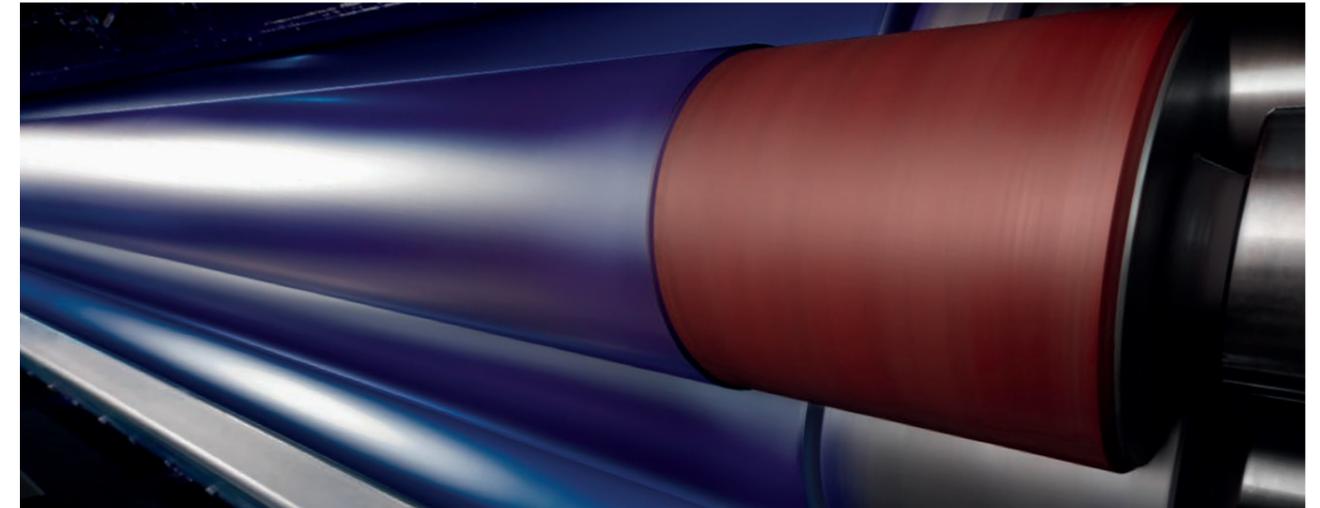
The advent of faster running and increasingly precise press performance coupled with an even more demanding press room environment has had a significant impact on rubber covers. More is demanded of them than ever before. And that means

they must be stripped off and replaced often. Even under the eye of an experienced craftsman, the stripping process is a delicate one. End-users, OEMs and rubber cover manufacturers have approached INOMETA and asked for two things: Firstly a way to speed up the removal of worn rubber covers from the CFRP core. And secondly to insure that the structural and performance characteristics of the CFRP core are not affected by the cover stripping process.

The red layer indicates: Go no further.

With the recovering layer PROTEK 334I integrated into the core, the service life of the CFRP roller core can be extended considerably. The protective layer provides a ceramic-reinforced compound boundary between the valuable CFRP roller core investment and the rubber cover. Until now, when removing the worn rubber cover, the lathe operator couldn't always know when

PROTEK 334I is precisely applied around the rigid, low inertia CFRP roller core. The red color of the layer alerts that the rubber cover has been completely removed. PROTEK 334I can be retrofitted on existing carbon fiber rollers or engineered into new CFRP cores.



the surface of the CFRP core was about to be reached. This was, in part, due to the fact that the core and the rubber cover were both black. But now, thanks to the strong red color of the PROTEK 334I layer, it's easy for the operator to know when the CFRP core surface has been reached. As clever as the red indicator color is, the real added value is INOMETA's ceramic-infused coating. PROTEK 334I is resistant to wear, pressure and abrasion.

Optimal surface properties.

In addition to the high pressure resistance and maximum tensile strength, the extreme stability of the PROTEK 334I layer ensures optimal resistance to the frequent removal of the rubber cover for numerous recoverings. PROTEK 334I has a smooth and even surface which is both antistatic and

heat resistant up to 160°C – both are optimal properties for vulcanizing new rubber covers. PROTEK 334I is easy to clean with normal cleaners and solvents such as acetone, ethanol or benzene. On the whole, PROTEK 334I ensures much easier handling and maximum process stability when renewing the rubber cover. Those who wish to protect their CFRP rollers should not delay and have PROTEK 334I applied during the next recovering process. All new CFRP rollers are of course available with PROTEK coating.



A worthwhile investment: for OEMs, rubber cover manufacturers and end-users who intend to benefit from their CFRP roller investment as long as possible.

PRODUCT INFORMATION

Coating: PROTEK 334I

Description of coating:

Composite coating for CFRP rollers on a fibre and particle-reinforced epoxy resin basis

Properties:

- ▶ very high resistance to wear and tear resistant to abrasion
- ▶ very good resistance to corrosion
- ▶ high degree of hardness: 90 Shore D at 20°C
- ▶ pressure resistance 120 MPa

- ▶ very high tensile strength
- ▶ excellent crack resistance due to unidirectional fibre orientation
- ▶ excellent adhesive strength on CFRP > 25 MPa
- ▶ permanent temperature resistance 120°C
- ▶ max. vulcanization temperature 160°C

Application:

Durable CFRP rollers for printing units and other applications

"It's very easy to remove the rubber layer," according to customers after the re-covering process with INOMETA's PROTEK 334I layer. "The properties of the PROTEK surface, which is hard and smooth, are ideal for removing the rubber cover. There were no signs anywhere that the brushes 'grabbed' or tore out parts of the core surface."



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