

# Green light for green NORMATEC® FKM O-rings

Hugo Keller, Senior Engineer

It is not Angst+Pfister's style to be satisfied with just making the grade. Always intent on creating advantages for our partners, Angst+Pfister continually seeks out new solutions to optimize benefits for customers. And that is exactly what we have also done with NORMATEC® FKM O-rings. The fluoroelastomer seals have excellent material properties and perform their task magnificently in their designated application areas. But Angst+Pfister discovered a way to improve them: the seals used to be supplied only in the color black, but now they are also available in green. The FKM O-rings are thus visually easy to tell apart from conventional O-rings, making them much easier to handle, for instance in assembly operations.

For years Angst+Pfister has been working together with Birchmeier Sprühtechnik AG as a supply partner. In Stetten, Switzerland, Birchmeier Sprühtechnik AG manufactures high-grade spraying and foaming devices that enjoy a first-rate international reputation. Birchmeier Sprühtechnik AG exports more than 60% of its production volume and supplies its products to more than 40 coun-

tries. The company boasts a market share of up to 90% in Switzerland. It employs only the finest components in order to guarantee enduring trouble-free operation of its spraying and foaming equipment. Angst+Pfister supplies Birchmeier Sprühtechnik AG with a lineup of components that includes NORMATEC® FKM O-rings.

## A textbook application for NORMATEC® FKM O-rings

The NORMATEC® FKM O-rings are used as static or semi-dynamic seals in the hose fittings, hand valves, filler caps and sealing lids of Birchmeier spraying equipment. The liquids used in the sprayers are often aggressive. The O-rings must withstand diluted acids, alkalis and solvents, and they must provide a perfect seal over a long operational lifetime – a job tailor-made for NORMATEC® FKM O-rings.

But there was one minor blemish: on the assembly line and in replacement parts service, the black NORMATEC® FKM O-rings were hard to tell apart from their likewise black "O-ring colleagues" made from conventional materials. To make it easier to differentiate between them, the seemingly simplest and most effective solution at first glance was to use colored FKM O-rings.



Spray-Matic 10 SP stainless steel pressure sprayer



Green NORMATEC® FKM O-rings from Angst+Pfister are employed in Birchmeier spraying equipment.



## Cautious innovation

Birchmeier Sprühtechnik AG wasn't the only company that requested the green O-rings from Angst+Pfister; other customers were also interested. Out of a sense of responsibility toward our customers, Angst+Pfister subjected the seals to a thorough examination and subsequently decided to resist the temptation to simply add the green O-rings to our product assortment, for two good reasons.

In critical deployment areas like the ones in which Birchmeier sprayers are also used, the "interior life" of the O-rings is a crucial determinant of their enduring operational safety and dependability. The colored O-rings fell well short of the black ones in terms of their performance, mainly with regard to their chemical resistance and compression set. Persuaded by this forceful argument, the customers decided to continue using black FKM O-rings. Meanwhile, Angst+Pfister closely monitored advancements on the material development front.

Innovations in material engineering have recently closed the small but critical performance gap between green and black O-rings. Carbon black filler is replaced by a light-colored additive, making it possible to dye the O-ring material. The green-colored modern FKM materials can now confidently compete with the original FKM material.

## Angst+Pfister adds color to its O-ring assortment

In view of the excellent properties of the newly developed generation of green O-rings, Angst+Pfister has now given them the green light and has added them to its standard product range. The now high-grade elastomer features excellent resistance to chemicals and a low compression set. Its mechanical properties are also outstanding. A high standard of quality coupled with off-the-shelf product availability and a very good value proposition round out the green O-rings' impressive performance.

## Angst+Pfister takes responsibility toward its customers

Creativity and openness to innovation are a standard routine at the Angst+Pfister Group. At the same time, we are aware of our great responsibility toward our customers, and we therefore give innovations the green light only when we can justify that to our partners.

Easy differentiation between FKM O-rings and those made of conventional materials is very important not just to Birchmeier Sprühtechnik AG, but to many other customers as well. We would be glad to talk to you about our HITEC® and NORMATEC® precision O-rings. Contact us for a technical consultation.

## NORMATEC® FKM NT 80.7/70 green O-ring seals feature the following material properties:

- Color: green, similar to RAL 6021
- Hardness: 70 +/- 5 IRHD
- Operating temperature range: -20°C to +200°C
- Short-term operating temperature: up to +230°C
- Media resistance: generally good resistance to chemicals; resistance to oils, fuels, hydraulic fluids, aliphatic hydrocarbons, hardly inflammable fluids, acids and alkalis, pesticides, detergents

NORMATEC® FKM NT 80.7/70 green O-rings and HITEC® precision O-rings are both employed as components in the high-quality products manufactured by Birchmeier Sprühtechnik AG. The optimum choice of material ensures excellent operational dependability of the spraying equipment and very long overhaul intervals.



Your contact:  
Hugo Keller  
Angst+Pfister AG, 8052 Zürich, Switzerland  
Telephone: +41 (0)44 306 63 42  
E-mail: hugo.keller@angst-pfister.com

NORMATEC® is a registered trademark of Angst+Pfister.

HITEC® is a registered trademark of Angst+Pfister.