

PERTEC® UP HNBR



In the past HNBR was widely used in Food and Beverage applications, especially in cases where fat and oil resistance was needed or mechanical challenges on product side like nuts, grains and other abrasive ingredients asked for a mechanical stronger compound. Various concerns about harsh media have led to the use of HNBR being discontinued in many cases and replaced by fluorinated materials, such as those offered by Angst+Pfister with its own PERTEC® CIP and UP FKM materials. In the face of increasing PFAS regulations, customers want to explore fluorine-free materials that can adapt to today's challenges.

Angst+Pfister developed with the new PERTEC® UP HNBR, UP meaning "ultra-pure", a new high-tech compound specially designed for applications within the food and beverage industry.

With HNBR providing excellent mechanical properties traditionally, it has been possible to develop a compound from extraordinary purity and cleanliness, combined with the chemical resistance needed for typical industry-specific cleaning and sterilizing procedures, often done in place as CIP or SIP. Relying on non-fluorinated polymers only, Angst+Pfister's new compounds offers now an interesting alternative material solution for applications in contact with oils and fat, where EPDM is not possible to use due to extensive swelling.

Features

- Excellent mechanical properties within the wide temperature range of -30°C up to +150°C (short term contact in water and steam may be even higher)
- Suitable for the production of complex engineered moulded parts as well as for O-Rings
- For static and dynamic applications
- Crosslinking agent: peroxide

Benefits

- 75 Shore A HNBR compound with low PAH contents
- Excellent mechanical properties
- Complies with a lot of international food and beverage regulations and many more

Contact

Angst + Pfister AG
engineering@angst-pfister.com
www.angst-pfister.com

Material data and conformities

For material data and conformities please refer to our latest material data sheet and document of compliance.

Mechanical properties

Hardness nominal	75 ±5 Shore
Hardness	77 Shore
Density nominal	1.2 g/cm ³
Density	1.21 g/cm ³
Tensile strength	23.8
Elongation at break	304 %
Modulus 100%	7.9 N/mm ²
Compression set	24.5 % ISO 815-1A 24 h, +125 °C
	25 % ISO 815-1A 24 h, +150 °C
	29 % ISO 815-1B 24 h, +150 °C
Tear resistance	43 N/mm
Abrasion	70 mm ³

Upon request Angst+Pfister can offer many more approvals.

Industries/Segments			Typical Products
Food & Beverage 	(Pharma) 	(Chemical) 	O-rings Moulded parts Dynamic seals