



# PCP ELASTOMER SPECIFICATIONS

**EXPERIENCE  
PERFORMANCE.**

# ELASTOMERS

## SOFT MEDIUM NITRILE (SN1)

- Low-hardness, medium-nitrile elastomer with excellent mechanical properties including tear and elongation
- Resilient elastomer capable of handling abrasives including large solids while minimizing associated damage
- Enables a higher interference rotor fit that prevents or delays decline in volumetric efficiency, even after significant stator material loss from abrasive wear

## MEDIUM NITRILE (MN1)

- General-purpose, abrasive resistant, medium nitrile elastomer with excellent mechanical properties
- Very good water resistance, and ability to handle moderate aromatic content in the produced fluid

## HIGH NITRILE (HN2)

- Augmented high-nitrile elastomer with significant enhancements to mechanical properties, oil and chemical resistance
- Offers the best combination of oil and water resistance
- Superior stator-tube bonding, with high retention of bond strength even after exposure to high temperature and aggressive fluids

- LS has an elastomer datasheet fully compliant to ISO 15136-1 Annex A, technical bulletins/summaries targeted at specific application types and/or downhole scenarios (ex. high gas, water TDS, high swell fluids, low water cuts), and a database containing hundreds of field fluid test results offering enhanced predictive capabilities for new applications.
- Additionally, LS can conduct new field fluid evaluation simulating downhole conditions, utilizing standard ASTM procedures or at more representative conditions, to offer advanced elastomer and pump sizing recommendations.
- For additional information on LS elastomers please contact an LS representative.

Elastomer Code	Typical Applications	Nitrile Level (% ACN)	Hardness (Shore A)	Maximum Temperature	Maximum API Gravity	Water Resistance	Abrasive Resistance	H2S Resistance	Gas Resistance*
SN1	Heavy oil (CHOPS), high abrasives	32 to 36	55 to 60	60°C (140°F)	15	Very Good	Excellent	Fair	Fair
MN1	Heavy to moderate oil, moderate abrasives, CSG/CBM	32 to 36	65 to 70	80°C (176°F)	20** (25**)	Very Good	Very Good	Good	Good
HN2	Medium to light oil, high CO2/free gas, chemical injection, deeper/hotter wells	45 to 50	70 to 75	100°C (212°F)	35** (40**)	Very Good	Good	Good	Very Good

\* Gas & explosive-decompression resistance is a concern primarily with CO2 since methane (CH4) permeability is significantly lower in elastomers  
 \*\* Suitability of upper API gravity depends on specific application conditions including oil chemistry, water cut, and temperature