

# PERFLUOROELASTOMER (FFKM)

## AKRON PF9317 PRECOMPOUND

**AKRON<sup>®</sup>**

### Product Description

AKRON PF9317 is a next-generation perfluoroelastomer (FFKM) designed to deliver outstanding heat resistance, broad chemical compatibility, low compression set, and excellent sealing retention, even under extreme conditions. Uses Nitrile curing system, it offers enhanced durability and reliability for demanding applications.

### Key Features

- Outstanding Heat Resistance: Suitable for continuous use within a temperature range of **-10°C to 317°C (14°F to 599°F)**.
- Excellent Chemical Resistance: Provides superior resistance to oils and corrosive solvents.
- Low Compression Set: Ensures long-term sealing performance under challenging conditions.
- Plasma Resistance: Provides reliable durability in plasma-rich environments, ideal for critical applications.

### PF9317 Product Performance

#### Pre-cured Properties

Property	Unit	PF9317	Test Method
Mooney Viscosity (ML(1+10'), 121°C)	MU	46-75	ISO 289-1:2014 ASTM D1646-04
Appearance	-	Translucent	Visual Inspection
Density	g/cm <sup>3</sup>	2.04	ISO 2781:2008 ASTM D297-93
Fluorine Content	%	72.7	Oxygen Flask Combustion

#### Cured Properties

Property	Unit	PF9317	Test Method
Cure Curve (160°C × 30 min)			
MH (Maximum Torque)	dN·m	16.2	
ML (Minimum Torque)	dN·m	0.9	ISO 6502:1991
Ts2 (Scorch Time)	min:s	5:55	ASTM D5289-95
T90 (Cure Time)	min:s	13:36	

## Mechanical Properties

Property	Unit	PF9317	Test Method
Hardness (Shore A)	-	71	ISO 6502:1991 ASTM D5289-95
Tensile Strength	MPa	20.6	ISO 37:2005
Elongation at Break	%	160	ASTM D412-06a
Compression Set (290°C × 70 hr, 25%)	%	23	ISO 815-1:2008 ASTM D395-03

### Notes:

- The above test data are typical values provided for reference only and are not intended as product specifications.
- Cured Rubber Test Formula:**
  - PF9317:** 100 phr
  - BOAP:** 1.2 phr
  - N-990 Carbon Black:** 20 phr

### Recommended Curing Conditions

- Press Cure:** 170°C for 30 minutes
- Post-Cure:** 290°C for 24 hours

## Applications

PF9317 can be widely used across various industries, including:

- High-Temperature Chemical Industries:** Ideal for components operating in extreme thermal and chemical environments.
- Aerospace Applications:** Suitable for critical sealing and performance requirements in aviation and aerospace.
- Organic Processing Industries:** Designed for handling complex organic materials under challenging conditions.
- Semiconductor Manufacturing:** Provides reliability for sealing applications in precision manufacturing processes.

PF9317 is specifically engineered for manufacturing components resistant to various chemical media, such as:

- Acids (organic and inorganic)
- Caustic alkalis
- Ketones, aldehydes, esters, ethers, and alcohols
- Solvents, hydrocarbons, and other corrosive agents

Commonly manufactured items include:

- Sealing Elements:** O-rings, gaskets, valve bodies, diaphragms, and other elastic sealing components.

## Packaging

- Packed in plastic film, 1 kg per package, or customized according to customer requirements.

## Transportation

- Transported as non-hazardous solid material.
- Ensure packaging integrity during transportation.

## Storage

- Store at room temperature in a dry, ventilated, and shaded environment.
- Valid for **one year** under proper storage conditions.
- Keep in a neutral environment, avoiding contact with acidic or alkaline substances.

## Safety Guidelines

- Follow standard precautions to avoid skin and eye contact or inhalation of fumes.
- Refer to the **Material Safety Data Sheet (MSDS)** for detailed safety instructions or contact our company for more information.

## OTHER INFORMATION

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<b>Prepared by</b>	: Edward Shi
<b>Additional Information</b>	: This datasheet provides the best available information on the specifications, usage, and handling of the product. It is provided in good faith, based on current knowledge, but no warranty, expressed or implied, is offered. We disclaim any responsibility for losses or damages that may arise from using the information provided and do not assume any liability for violations or non-compliance resulting from its application.

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