# **Precision Polymer Z70F**

# Acrylonitrile Butadiene Rubber

## Precision Polymer Engineering Ltd.

#### Message:

Z70F is a medium acrylonitrile (ACN = 34%), HNBR compound formulated using only those ingredients determined by the US Food and Drug Administration (FDA).
The high mechanical strength of Z70F provides excellent wear and abrasion resistant properties when used in dynamic applications.
Z70F offers excellent steam and chemical resistance to a broad range of media, making it ideal for use in various applications requiring FDA and 3A compliance. It is suitable for use in all food contact applications including dry, aqueous and fatty media.
Available in any sized O-ring (fully moulded up to 2.5m/8ft internal diameter) and custom designed profiles and components.
Key Attributes
Excellent chemical and steam resistance
Higher maximum operating temperature than standard nitrile (NBR)
High mechanical strength
FDA compliant - extraction tested to CFR 21 § 177.2600 (e,f)
3A Sanitary Standard 18-03 Class 3 compliant
Free from Animal Derived Ingredients

Typical Applications

Change in Ultimate Elongation in Air

-25

(150°C, 70 hr)

Recommended for use in food and dairy production and processing equipment, for both static and dynamic applications.

General Information					
Features	High strength				
	Good wear resistance				
	Good chemical resistance				
	Good wear resistance				
	Steam resistance				
	Compliance of Food Exposur	e			
	No kinetic components				
Uses	Non-specific food applications				
Agency Ratings	FDA 21 CFR 177.2600				
	FDA Food Exposure, Not Rat	ed			
Appearance	Black				
Hardness	Nominal Value		Test Method		
IRHD Hardness	70		ASTM D1415, ISO 48		
Elastomers	Nominal Value	Unit	Test Method		
Tensile Strength (Yield)	16.0	MPa	ASTM D412, ISO 37		
Tensile Elongation (Break)	250	%	ASTM D412, ISO 37		
Compression Set (125°C, 72 hr)	25	%	ASTM D395, ISO 815		
Aging	Nominal Value	Unit	Test Method		
Change in Tensile Strength in Air (150°C,					
70 hr)	-15	%	ASTM D412, ISO 37		

%

ASTM D412, ISO 37

Change in IRHD Hardness in Air (150°C, 70 hr)	10		ASTM D573, ISO 188
Thermal	Nominal Value	Unit	
Maximum Operating Temperature	180	°C	
Low Temperature Resistance - Non Brittle for 3 mins	-40	°C	ASTM D2137
Additional Information	Nominal Value	Unit	Test Method

Minimum Operating Temperature: -40°C (-40°F)

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