

### FFKM raw gum/curing monomer contains iodine group QFR-100

**Production Description:**

QFR-100 is a chemically resistant perfluoroelastomer. Offers a wide range of corrosive media sealing capabilities as well as excellent compression set value.

**Features:**

1. Excellent heat resistance, applicable temperature range -10°C ~ 230°C.
2. Excellent oil resistance, corrosion resistance and solvent resistance.
3. Low compression deformation

**Properties:**

Item		unit	103	106	109	Testing Method	
Raw Gum	Mooney viscosity ML (1+10' ), 121°C	MU	15-45	46-75	76-120	ASTM D1646	
	Exterior	/	semitransparent			Visual Inspection	
	Density	g/cm <sup>3</sup>	2.04			ASTM D792	
	Fluorine Content	%	72.7			Oxygen cylinder combustion method	
Curing Gum	Curing Curve (155°C*15min)	MH	dN.m	26.3	27.5	28.1	ASTM D1646
		ML	dN.m	0.7	0.9	1.5	
		Ts2	min:s	1:10	1:13	1:20	
		T90	min:s	6:40	6:43	6:52	
	Hardness		Shore A	72	73	74	ASTM D2240
	Tensile Strength		MPa	18.9	19.1	19.0	ASTM D412
	Elogation		%	143	141	138	ASTM D412 DIEC
Compression rate 200°C×70hr, 25%		%	28	28	27	ASTM D412 DIEC	

Note 1: The above test data are typical values and are for reference only, not as a product test report.  
Vulcanized rubber test data formula: 100 parts QFR-100, 1.5 parts Luperox 101XL-45, 2 parts TAIC (50%), 15 parts N-990 carbon black.

**Instructions:**

1. It is recommended to add 1.5 parts of Luperox 101XL-45 and 2-4 parts of TAIC (50%) per 100 parts of QFR-100.
2. Recommended vulcanization temperature and time: molding curing: 155°C×15min, The mold can be opened directly after the curing time is reached, two-stage curing: 230°C\*4h.

**Applications:**

1. Mainly used in chemical processing, semiconductor manufacturing, oil and gas and other industrial fields.
2. For the manufacture of components resistant to chemical media (such as acids, caustic alkalis, ketones, aldehydes, esters, ethers, alcohols, solvents, etc.).
3. Various types of elastic sealing elements can be manufactured, such as O-rings, gaskets, valve bodies, diaphragms, etc.

**Product packaging:**

1. Packed in plastic film, 1kg per pack. Or packaged according to customer needs.

**Product Shipping:**

1. It is transported as non-dangerous goods solid.
2. It should be well packaged during transportation.

**Product storage:**

1. Store at room temperature in a dry and ventilated environment, valid for one year.
2. The storage environment should be neutral, and it is forbidden to contact with amines.

**Safety Precautions:**

1. Routine care and precautions should be taken to avoid skin contact, eye contact and inhalation of fumes.
2. For other safety matters, please refer to the material safety data sheet, or contact our company.

## FFKM raw gum/curing monomer contains iodine group QFR-110

### Production Description:

QFR-110 is a chemically resistant perfluoroelastomer. Capable of sealing against a wide range of corrosive media as well as excellent compression set value, it is more resistant to water vapor, alkali and other media than the QFR-100 standard type.

### Features:

1. Excellent heat resistance, applicable temperature range -10°C ~ 230°C.
2. Excellent oil resistance, corrosion resistance and solvent resistance.
3. Low compression deformation

### Properties:

Item		unit	113	116	119	Testing Method	
Raw Gum	Mooney viscosity ML (1+10' ), 121°C	MU	15-45	46-75	76-120	ASTM D1646	
	Exterior	/	semitransparent			Visual Inspection	
	Density	g/cm <sup>3</sup>	2.04			ASTM D792	
	Fluorine Content	%	72.7			Oxygen cylinder combustion method	
Curing Gum	Curing Curve (155°C*15min)	MH	dN.m	22.3	23.5	24.6	ASTM D1646
		ML	dN.m	0.7	0.9	1.5	
		Ts2	min:s	4:25	4:43	1:10	
		T90	min:s	6:20	6:50	6:45	
	Hardness	Shore A	72	73	74	ASTM D2240	
	Tensile Strength	MPa	17.9	18.1	18.5	ASTM D412	
	Elongation	%	163	171	188	ASTM D412 DIEC	
	Compression rate 200°C×70hr, 25%	%	28	28	27	ASTM D412 DIEC	

Note 1: The above test data are typical values and are for reference only, not as a product test report.  
Vulcanized rubber test data formula: 100 parts QFR-110, 1.5 parts Luperox 101XL-45, 2 parts TAIC (50%), 15 parts N-990 carbon black.

### Instructions:

1. It is recommended to add 1.5 parts of Luperox 101XL-45 and 2-4 parts of TAIC (50%) per 100 parts of QFR-110.
2. Recommended vulcanization temperature and time: molding curing: 155°C×15min, two-stage curing: 230°C\*4h.

### Applications:

1. Mainly used in chemical processing, semiconductor manufacturing, oil and gas and other industrial fields.
2. For the manufacture of components resistant to chemical media (such as acids, caustic alkalis, ketones, aldehydes, esters, ethers, alcohols, solvents, etc.).
3. Various types of elastic sealing elements can be manufactured, such as O-rings, gaskets, valve bodies, diaphragms, etc.

### Product packaging:

1. Packed in plastic film, 1kg per pack. Or packaged according to customer needs.

### Product Shipping:

1. It is transported as non-dangerous goods solid.
2. It should be well packaged during transportation.

### Product storage:

1. Store at room temperature in a dry and ventilated environment, valid for one year.
2. The storage environment should be neutral, and it is forbidden to contact with amines.

### Safety Precautions:

1. Routine care and precautions should be taken to avoid skin contact, eye contact and inhalation of fumes.
2. For other safety matters, please refer to the material safety data sheet, or contact our company.

## FFKM raw gum/ High temperature peroxygen QFR-290

### Production Description:

QFR-290 is a chemically resistant perfluoroelastomer. It has a wide range of corrosive medium sealing ability and excellent compression set value. It has better high temperature resistance than 1000 type perfluoroether rubber, and the long-term use temperature reaches 290 degrees.

### Features:

1. Excellent heat resistance, applicable temperature range -10°C ~ 310°C.
2. Excellent oil resistance, corrosion resistance and solvent resistance.
3. Low compression deformation

### Properties:

Item		unit	293	296	299	Testing Method	
Raw Gum	Mooney viscosity ML (1+10' ), 121°C	MU	15-45	46-75	76-120	ASTM D1646	
	Exterior	/	semitransparent			Visual Inspection	
	Density	g/cm <sup>3</sup>	2.04			ASTM D792	
	Fluorine Content	%	72.7			Oxygen cylinder combustion method	
Curing Gum	Curing Curve (170°C*15min)	MH	dN.m	26.3	27.5	28.6	ASTM D1646
		ML	dN.m	0.7	0.9	1.5	
		Ts2	min:s	1:10	1:13	1:20	
		T90	min:s	6:40	6:43	6:52	
	Hardness	Shore A	72	73	74	ASTM D2240	
	Tensile Strength	MPa	15.9	16.1	17.0	ASTM D412	
	Elongation	%	163	171	178	ASTM D412 DIEC	
	Compression rate 290°C×70hr, 25%	%	38	36	35	ASTM D412 DIEC	

Note 1: The above test data are typical values and are for reference only, not as a product test report.

Vulcanized rubber test data formula: 100 parts QFR-290, 1.5 parts Luperox 101XL-45, 15 parts N-990 carbon black.

### Instructions:

1. It is recommended to add 1.5 parts of Luperox 101XL-45 per 100 parts of QFR-290.
2. Recommended vulcanization temperature and time: molding curing: 170°C×15min, two-stage curing: 290°C\*(8+16)h.

### Applications:

1. Mainly used in chemical processing, semiconductor manufacturing, oil and gas and other industrial fields.
2. For the manufacture of components resistant to chemical media (such as acids, caustic alkalis, ketones, aldehydes, esters, ethers, alcohols, solvents, etc.).
3. Various types of elastic sealing elements can be manufactured, such as O-rings, gaskets, valve bodies, diaphragms, etc.

### Product packaging:

1. Packed in plastic film, 1kg per pack. Or packaged according to customer needs.

### Product Shipping:

1. It is transported as non-dangerous goods solid.
2. It should be well packaged during transportation.

### Product storage:

1. Store at room temperature in a dry and ventilated environment, valid for one year.
2. The storage environment should be neutral, and it is forbidden to contact with amines.

### Safety Precautions:

1. Routine care and precautions should be taken to avoid skin contact, eye contact and inhalation of fumes.
2. For other safety matters, please refer to the material safety data sheet, or contact our company.

## FFKM raw gum/curing monomer contains cyano group QFR-3150

### Production Description:

FFKM QFR-3150 is a new type of perfluoroelastomer that provides excellent heat resistance, broad media resistance, low compression set and strong seal retention at extreme temperatures.

### Features:

1. Excellent heat resistance, applicable temperature range -10°C ~325°C.
2. a wide range of chemical resistance properties.
3. Excellent anti-plasma performance.
4. Low compression deformation.

### Properties:

Item		unit	3153	3155	3159	Testing Method	
Raw Gum	Mooney viscosity ML (1+10' ), 121°C	MU	15-45	46-75	76-120	ASTM D1646	
	Exterior	/	semitransparent			Visual Inspection	
	Density	g/cm <sup>3</sup>	2.04			ASTM D792	
	Fluorine Content	%	72.2			Oxygen cylinder combustion method	
Curing Gum	Curing Curve (170°C*30min)	MH	dN.m	15.3	16.2	16.9	ASTM D1646
		ML	dN.m	0.86	1.15	1.53	
		Ts2	min:s	4:25	4:43	4:50	
		T90	min:s	13:56	14:13	14:22	
	Hardness		Shore A	70	73	74	ASTM D2240
	Tensile Strength		MPa	19.5	20.4	21.0	ASTM D412
	Elongation		%	150	141	140	ASTM D412 DIEC
	Compression rate 290°C×70hr, 25%		%	28	29	29	ASTM D412 DIEC

Note 1: The above test data are typical values and are for reference only, not as a product test report.  
Vulcanized rubber test data formula: 100 parts QFR-3150, 1.2 parts BOAP, 20 parts N-990 carbon black.

### Instructions:

1. It is recommended to add 1.2 parts of BOAP per 100 parts of QFR-3150.
2. Recommended curing temperature and time: molding curing: 170°C×30min; two-stage curing: 290°C\*(8+16)h.

### Applications:

1. Mainly used in high temperature chemical industry, aerospace industry, organic matter processing industry and semiconductor manufacturing industry.
2. For the manufacture of components resistant to chemical media (such as acids, caustic alkalis, ketones, aldehydes, esters, ethers, alcohols, solvents, etc.).
3. Various types of elastic sealing elements can be manufactured, such as O-rings, gaskets, valve bodies, diaphragms, etc.

### Product packaging:

1. Packed in plastic film, 1kg per pack. Or packaged according to customer needs.

### Product Shipping:

1. It is transported as non-dangerous goods solid.
2. It should be well packaged during transportation.

### Product storage:

1. Store at room temperature in a dry and ventilated environment, valid for one year.
2. The storage environment should be neutral, and it is forbidden to contact with amines.

### Safety Precautions:

1. Routine care and precautions should be taken to avoid skin contact, eye contact and inhalation of fumes.
2. For other safety matters, please refer to the material safety data sheet, or contact our company.