

FreChem FKM Raw Gum Naming System

FC20/T20

F: Represents Jiangsu FreChem Co., Ltd;

C: Represents fluoelastomer family;

“C” means copolymer of vinylidene fluoride and hexafluorpropene;

“T” means terpolymer of vinylidene fluoride, tetrafluoroethylene and hexafluorpropene;

“H” means high fluorine content FKM

“P” means peroxide curable FKM

20: Represents nominal Mooney Viscosity of the product; the data could be 20-180, represents that the Mooney viscosity is 20-180;

W: represents wide molecular distribution

Precaution for the processing and storage of fluoroelastomer

1. Precaution for safety: Fluoroelastomer gum has good thermal stability below 260°C and will decompose a little if located under the temperature of 260-300°C for a long time, the main contents of the gas decomposed are toxic fluorine hydride and fluorocarbon; When the temperature is above 300°C, the decomposition will be quickened;
2. Precaution for processing: During the processing, it should avoid compounding gum with metal powder or amines (content more than 10%), otherwise violent reaction will occur. Fluoroelastomer will release a little toxic gas such as fluorine hydride and fluorine acid during vulcanization, so good ventilation in the processing place is very important. Smoking is prohibited in work area. Please wash your face and hands carefully when you leave the working area.
3. Precaution for storage: Fluoroelastomer should be stored in clean, cool and dry place because it is sensitive to water and light.

Technical indexes

FKM raw gum copolymer

Items	C20	C30	C40	C50	C70	C120
I Appearance	White or light-yellow sheet, no visible impurities					
. Fluorine content %	66	66	66	66	66	66
Density (g/cm ³) 23 °C	1.82±0.02	1.82±0.02	1.82±0.02	1.82±0.02	1.82±0.02	1.82±0.02
P Mooney viscosity(ML(1+10)121°C)	25±5	35±5	45±5	55±5	75±5	120-140
aTensile strength after press cure(MPa) c 177°C,10min ≥	8.0	8.0	9.0	9.0	9.0	9.0
k Tensile strength after post e cure(Mpa) 230°C,24H ≥	10.0	10.0	11.0	11.0	11.0	12.0
d Elongation at break after press cure (Mpa) 177°C,10min ≥	180	180	180	180	180	180
w Elongation at break after post cure i (Mpa) 230°C,24H ≥	160	160	160	160	160	160
I 200°C 70H Compressibility20% . Compression set (%) ≤	20	20	20	20	20	12
P _{200°C} in No.3 jet fuel, weight increase a after 24H (%) ≤	5	5	5	5	5	5
c Water content (%) ≤	0.15	0.15	0.15	0.15	0.15	0.1

k

1. Packed with sealed PE bag, load in waterproof paper drum. The net weight is 25±0.1kg per drum.
2. The experiment results above are based on the laboratory authorized by our company, which can be used for reference. Your test results may have some difference if the process of mixing, test equipment and test method are different.
3. Rubber compounds recipe: FKM 100g; AF 2.0g; BPP 0.5g; MgO 3.0g; Ca(OH)₂ 6.0g; N990 30g.
Press Cure 177 °C @10min;Post Cure 230 °C @24hour.

Jiangsu Frechem Co., Ltd

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Technical indexes

FKM raw gum Terpolymer

Items	T20	T30	T40	T70	T100
Appearance	White or light-yellow sheet, no visible impurities				
Fluorine content %	68	68	68	68	68
Density (g/cm ³) 23 °C	1.84-1.88	1.84-1.88	1.84-1.88	1.84-1.88	1.84-1.88
Mooney viscosity(ML(1+10)121°C)	20-30	30-40	40-60	60-90	90-120
Tensile strength after press cure(MPa) 177°C,10min≥	9.0	9.0	9.0	9.0	10.0
Tensile strength after post cure(Mpa) 230°C,24H≥	10.0	11.0	11.0	11.0	12.0
Elongation at break after press cure (Mpa) 177°C,10min≥	180	180	180	180	180
Elongation at break after post cure (Mpa) 230°C,24H≥	160	160	160	160	160
200°C 70H Compressibility20% Compression set (%)≤	30	30	30	30	30
Oil resistivity	180 °C×24h 4109 bisphenol oil resistivity (%)≤	6	6	6	6
	(200 °C×24h) RP-3 oil resistivity (%) ≤	7	7	7	7
Water content (%)≤	0.15	0.15	0.15	0.15	0.15

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