Color Code

NBR– Nitrile Butadiene Rubber

Instantaneous temperature：–30~110℃
Continuous operating temperature: –10~100℃
Applicable medium: water and aqueous solution; edible oil; mineral oil; ethanol; ethylene glycol, etc.
NBR also has food–grade elastomer, which are mainly used for working conditions that are in contact with food.

SERIAL	INSPECTION ITEM	CRITERIA	TEST RESULT	TEST METHOD
1	Hardness (Shore A)/Degree	75±5	78	ISO 48-4:2018
2	Tensile Strength/MPa	≥13	14.13	ISO 34-1:2017
3	Elongation at Break/%	≥150	205	ISO 37-2017
4	Compression Set, Ratio25% 180°C×24h	≤25%	16.32%	ISO 815-1:2019
5	Tear Strength (min)/KN/m	≥30	37	ISO34-1:2017
6	Density g/cm^3	-	1.242	ISO 2781:2018

Recommended Applications:

Nitrile rubber is a copolymer of butadiene and acrylonitrile. It has excellent corrosion resistance to mineral oil, edible oil, and aliphatic hydrocarbons. It is widely used in equipment contacting gasoline and fuel. It is resistant to alkali and non–oxidizing dilute acid corrosion, not resistant to oxidizing acids (lactic acid, chromic acid, etc.), aromatic hydrocarbons, esters, ketones, ethers, halogenated hydrocarbons and other strong solvent corrosion.

Color Code

EPDM– Ethylene Propylene Diene Monomer

Instantaneous temperature：–54~150℃
Continuous operating temperature: –10~140℃
Applicable medium: water and aqueous solution; high–temperature hot water and steam; various chemicals; low–concentration acid and alkali, etc.
EPDM also has food–grade elastomer, which are mainly used for working conditions that are in contact with food.

SERIAL	INSPECTION ITEM	CRITERIA	TEST RESULT	TEST METHOD
1	Hardness (Shore A)/Degree	80±5	83	ISO 48-4:2018
2	Tensile Strength/MPa	⩾12	14.1	ISO 34-1:2017
3	Elongation at Break/%	⩾150	223	ISO 37-2017
4	Compression Set, Ratio25% 180°C×24h	⩽30%	18.09%	ISO 815-1:2019
5	Tear Strength (min)/KN/m	⩾20	34	ISO34-1:2017
6	Density g/cm^3	-	1.231	ISO 2781:2018

Recommended Applications:

Ethylene–propylene rubber is a copolymer of ethylene and propylene. Wear resistance, aging resistance, ozone resistance and general corrosion resistance are all very good. It is resistant to dilute acid, alkali, salt corrosion, and not resistant to oxidizing acid, aromatic hydrocarbons and petroleum products. It has excellent heat aging resistance, can be used at 140˚C, and its physical properties change slowly. Suitable for gas –water and water –water exchange . Ethylene –propylene rubber is not resistant to corrosion by oil and petroleum –based products . It is not resistant to oxidizing acids, aromatics, esters, benzene, alkanes, and

Color Code

NBRHT– Nitrile Butadiene Rubber High Temperature

Instantaneous temperature：–30~120℃
Continuous operating temperature: 0~110℃
Applicable medium: water and aqueous solution; edible oil; mineral oil; ethanol; ethylene glycol, etc.
NBRHT also has food–grade elastomer, which are mainly used for working conditions that are in contact with food.

SERIAL	INSPECTION ITEM	CRITERIA	TEST RESULT	TEST METHOD
1	Hardness (Shore A)/Degree	75±5	78	ISO 48-4:2018
2	Tensile Strength/MPa	≥13	14.54	ISO 34-1:2017
3	Elongation at Break/%	≥150	211	ISO 37-2017
4	Compression Set, Ratio25% 180°C×24h	≤25%	18.25%	ISO 815-1:2019
5	Tear Strength (min)/KN/m	≥30	42	ISO34-1:2017
6	Density g/cm^3	-	1.313	ISO 2781:2018

Color Code

EPDMHT– Ethylene Propylene Diene Monomer High Temperature

Instantaneous temperature：–54~165℃
Continuous operatingtemperature：0~155℃
Applicable medium: water and aqueous solution; high–temperature hot water and steam; various chemicals; low–concentration acid and alkali, etc.
EPDMHT also has food–grade gasket, which are mainly used for working conditions that are in contact with food.

SERIAL	INSPECTION ITEM	CRITERIA	TEST RESULT	TEST METHOD
1	Hardness (Shore A)/Degree	80±5	82	ISO 48-4:2018
2	Tensile Strength/MPa	⩾12	13.9	ISO 34-1:2017
3	Elongation at Break/%	⩾150	218	ISO 37-2017
4	Compression Set, Ratio25% 180°C×24h	⩽25%	17.93%	ISO 815-1:2019
5	Tear Strength (min)/KN/m	⩾20	28.71	ISO34-1:2017
6	Density g/cm^3	-	1.247	ISO 2781:2018

Color Code

HNBR– Hydrogenated Nitrile Butadiene Rubber

Instantaneous temperature：–30~160℃
Continuous operating temperature: –20~150℃
Applicable medium: water and aqueous solution; edible oil; mineral oil; ethanol; ethylene glycol, etc.

SERIAL	INSPECTION ITEM	CRITERIA	TEST RESULT	TEST METHOD
1	Hardness (Shore A)/Degree	75±5	78	ISO 48-4:2018
2	Tensile Strength/MPa	⩾13	18.1	ISO 34-1:2017
3	Elongation at Break/%	⩾200	215	ISO 37-2017
4	Compression Set, Ratio25% 180°C×24h	⩽25%	16.21%	ISO 815-1:2019
5	Tear Strength (min)/KN/m	⩾30	42	ISO34-1:2017
6	Density g/cm^3	-	1.213	ISO 2781:2018

Color Code

Viton–A

Instantaneous temperature：–15~200℃
Continuous operating temperature: 5~180℃
Applicable medium: High temperature oil, alkalis, salts, petroleum products, hydrocarbons, etc.

SERIAL	INSPECTION ITEM	CRITERIA	TEST RESULT	TEST METHOD
1	Hardness (Shore A)/Degree	80±5	83	ISO 48-4:2018
2	Tensile Strength/MPa	⩾12	13.2	ISO 34-1:2017
3	Elongation at Break/%	⩾150	219	ISO 37-2017
4	Compression Set, Ratio25% 180°C×24h	⩽25%	17.15%	ISO 815-1:2019
5	Tear Strength (min)/KN/m	⩾15	30	ISO34-1:2017
6	Density g/cm^3	-	1.612	ISO 2781:2018

Recommended Applications:

Fluorine rubber is a general term for rubber containing fluorine atoms. This type of rubber has excellent corrosion resistance, resistance to various acids (including medium–concentration oxidizing acids), alkalis, salts, petroleum products, hydrocarbons, etc., but the solvent resistance is not as good as that of fluoroplastics. Fluorine rubber is expensive and is mainly used in aircraft, missiles, and aerospace. Used as hoses, gaskets, sealing rings, combustion box linings, etc., in the chemical industry, it can be used in high temperature and strong corrosive environments. It can also be used as rubber coatings and adhesives. However, this type of glue has poor water resistance and is not resistant to steam.

Color Code

Viton–G

Instantaneous temperature：–15~200℃
Continuous operating temperature: 5~180℃
Applicable medium：Hot water and steam, high–temperature mineral oil, solvents, etc.

SERIAL	INSPECTION ITEM	CRITERIA	TEST RESULT	TEST METHOD
1	Hardness (Shore A)/Degree	80±5	84	ISO 48-4:2018
2	Tensile Strength/MPa	⩾12	14.1	ISO 34-1:2017
3	Elongation at Break/%	⩾150	225	ISO 37-2017
4	Compression Set, Ratio25% 180°C×24h	⩽35	17.91%	ISO 815-1:2019
5	Tear Strength (min)/KN/m	⩾25%	32	ISO34-1:2017
6	Density g/cm^3	-	1.611	ISO 2781:2018

Recommended Applications:

G–type fluorine rubber is based on 26–type binary copolymer or 246–type terpolymer. A small amount of fluorine–containing monomer (such as perfluoroalkyl vinyl ether) is introduced into its main chain to provide active crosslinking points), or using iodine mobile polymerization technology to copolymerize with monomers containing iodine vulcanization points. Type G fluorine rubber can be vulcanized with peroxide vulcanization system and has excellent compression set, water resistance, water vapor resistance, solvent resistance, solvent resistance, fuel resistance and chemical resistance. It can work for a long time at 170℃.

Color Code

CR– Chloroprene rubber

Instantaneous temperature：–30~110℃
Continuous operating temperature: –25~80℃
Applicable medium：Widely used in ammonia and various fluorinated refrigerants.

SERIAL	INSPECTION ITEM	CRITERIA	TEST RESULT	TEST METHOD
1	Hardness (Shore A)/Degree	-	78	ISO 48-4:2018
2	Tensile Strength/MPa	-	14.55	ISO 34-1:2017
3	Elongation at Break/%	-	256	ISO 37-2017
4	Compression Set, Ratio25% 180°C×24h	-	15.66	ISO 815-1:2019
5	Tear Strength (min)/KN/m	-	31.66	ISO34-1:2017
6	Density g/cm^3	-	1.238	ISO 2781:2018

Recommended Applications:

The polarity of neoprene gives it resistance to oil swelling. Oil resistance and solvent resistance are better than natural rubber and styrene butadiene rubber, but not as good as nitrile rubber. Chloroprene rubber has good chemical stability. Except for highly oxidizing acids, it is resistant to corrosion by general chemicals. In addition, neoprene rubber has good air tightness (second only to butyl rubber and chlorosulfonated polyethylene rubber). It has flame resistance, water resistance, oil resistance, heat resistance, sunlight resistance, ozone resistance, acid and alkali resistance and chemical reagents. It can be used for a long time below 110°C.

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