Material	Hard- ness(A)	Temperature (°C)	Advantage	Disadvantage	Application
Silicone	20-95	-40~250	<ul> <li>waterproof, Good Insulation</li> <li>High Transmission, Anti-UV</li> <li>non-toxic, environmental friendly</li> </ul>	<ul> <li>Low tensile strength, Not anti- tearing</li> <li>Not anti-fuel oil, Not anti- abrasion</li> </ul>	Electronic, Medical, food
NR	20-100	-20~100	<ul> <li>Anti-oil, Hydroxide liquids such as ethanol</li> <li>Anti-abrasion, anti-tensile, flexibility</li> <li>Resistant alkali but not resistance acid</li> </ul>	<ul> <li>Easy Aging</li> <li>Become sticky when heated</li> <li>Easy to expansion in mineral oil</li> </ul>	Tire < Shoes
NBR	30-100	-10~100	· Anti-oil · waterproof · Heat-resistant	· Non anti polar solvent	
HNBR	60-90	-40~150	<ul> <li>Abrasion, tensile, heat, anti-ozone</li> <li>Anti-corrosion, Anti-chemical</li> <li>Anti-deformation</li> </ul>	<ul> <li>Not resist ethanol          <ul> <li>esters</li> <li>&amp;Aromatic solution</li> <li>Shorten life time</li> </ul> </li> </ul>	For automotive and refining industries
CR	20-90	-40~100	<ul> <li>Flexibility, anti-deformation</li> <li>Fireproof and flame resistant</li> <li>Anti-chemical, Anti-UV, Anti-Ozone</li> </ul>	<ul> <li>Raw rubber poor storage stability and will generate sulfur</li> <li>Not resistance strong acid</li> </ul>	For household appli- ances
IR	20-100	-50~120	<ul> <li>Less impurities, transparent color</li> <li>Anti-aging</li> </ul>	· absorbency	For a part of medical equipment
FKM (VITON)	60-90	-15~200	<ul> <li>Anti-oil</li> <li>Anti-Ozone, Heat-resistant</li> <li>electrical insulation</li> </ul>	<ul> <li>Expensive, not resist strong alkali</li> <li>Not low temperature resistance</li> <li>Not resist esters, Ketones</li> </ul>	For high temperature, drug resistance and so on environment
EPDM	40-90	-55~125	<ul> <li>High temperature resistance, anti- aging, anti-Ozone, flexibility</li> <li>Anti ethanol and esters</li> <li>Anti-Ozone &amp; oxidation</li> </ul>	· Not Anti-oil	For wiper strips, gas- kets, etc.

## Characteristics

Characteristic comparsion	⊚ Well O Good △ Ok × Bad					
	Acid	Base	Ethanol	Benzene	Ketone	
Silicone	$\bigcirc$	Ô	Ø	×	0	
NR	×	0	×	×	<b>X~</b> ∆	
NBR	$\bigtriangleup$	$\bigcirc$	Ô	×	×	
HNBR	Ô	Ô	Ô	×	×	
CR	$\bigtriangleup$	Ô	Ô	×	∆~0	
IR	×	0	Ó	×	∆~0	
FKM(VITON)	Ô	×	Ô	$\bigtriangleup$	×	
EPDM	0	0	0	×	Ô	