

1) **NBR**: NBR is the copolymer of butadiene and acrylonitrile polymerize at the suspend liquid.

2) **HNBR**: Its properties is better than NBR, applied temperature from -40 to 150 degree centigrade, it is better exist in H₂S than Viton does, and exist better in oil than NBR does.

3) **Fluoro rubber**: Fluoro rubber is the polymer which contents F. The fluoro rubber of Chinese code are two types: F-23 which equivalent to Kel-F and F-26 which equivalent to Viton. Fluoro rubber has the excellent properties such as heat resistance, matches well with oil, anti-corrosive and vaccum resistance, but fuoro rubber is not suitable in the liquids such as ketone and este and cold resistance is not good, huge change on permanent deform after it was pressed.

4) **EPDM**: EPDM is the polymer of ethene and propylene include terpolymer and binary copolymer.

5) **Silicone Rubber**: Silicon rubber is composite by organic Si and hydrocarbon. Good performance on heat and cold resistance, small change of permanent deform after it was pressed excellent on electric spread. The disadvantage are worse tear and wear resistance at the average temperature than other material rubbers, and it can not be used in the mineral oil with lower boiling point, it will be easy decomposed at the environment with high pressed water steam.

6) **PTFE**: It has a wide application range of temperature from -150 to 250 degree centigrade, extremely low friction coefficient and self-lubricate it will not felt on its surface its chemical characteristics are stable. The only matter which can corrode this kind of material is melted alkali metal and the F element in high temperature and pressure. It will changed in any temperature under the effect of burthen, when the temperature above 343 degree centigrade it will decompose and release poison smoke.

7) CR, HR and epichlorohydrin rubber etc. also can be used for secondary seal ring.

8) Soft carbon, adbestos and the composited material of rubber and plastic also can be used in secondary seal ring but in high temperature environment.