Materials

Technical characteristics

3S provides solutions upon your specifications. Our main materials:

Material	Operating temperatures	Main properties	Storage durability according ISO 2230
Nitrile NBR	-25 to +100°C	- Compression set : low to good. - Resistance to swelling in oils, alcohols, greases and fuels. - Good gas permeability. - Applications : food, drinkable water, hydraulics, oil, chemical, power generation, automotive.	7 years
Ethylene-Propylene-Diene Rubber EPDM	-45 to +150°C	- Good resistance to heat, ozone, ageing and weathering. - Good elasticity, good behaviour to low temperature and good isolation properties. - Applications : food, water, steam, isolation, electrical.	10 years
Chloroprene CR	-40 to +100°C	- Good resistance to ozone, weathering, chemical products and ageing. - Applications : air, water, alcohol, grease, CO2, etc...	7 years
Natural rubber NR	-68 to +80°C	- Very good properties in shock absorption and elasticity. - Excellent tear resistance and elongation. - Applications : Vibration dampers, diaphragms.	5 years
Silicone MVQ	-60 to +225°C	- High thermal resistance in heat and cold (special compound can be use until down -90°C). - Excellent dielectric properties. - Good resistance to ozone and oxygene. - Applications in medical and food industries.	10 year
Fluorosilicone FMVQ	-60 to +180°C	- Better resistance to swelling in synthetic mineral oils than silicone, good heat resistance. - Limited resistance to abrasion, low elasticity. - Applications : mainly static.	10 years
Fluorocarbone FKM	-15 to +240°C	- Fireproof. Very good heat resistance, weathering and ageing. - Good swelling resistance in mineral and solvent (even aromatic hydro-carbons). - Good chemical resistance. - Average resistance to low temperatures. - Applications : automotive, aircraft, chemical industry.	10 years
SBR	-50 to +80°C	- Excellent resistance to abrasion. - Applications : pneumatic, shoe sole, mixing with NR, automotive.	5 years

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Hydrogenated Nitrile HNBR	-35 to +150°C	- Very good mechanical properties especially tensile strength and tear. - Excellent resistance to abrasion, ozone, hydro-carbons, alcohols, oils, vegetable and animal greases. - Very good compression set. - Gas permeability. - Applications : automotive, oil industry, hot water.	7 years
Perfluorocarbon FFKM	-15 to +250°C	- Very wide chemical resistance. - High heat resistance(until +325°C for some specific compounds). - Low swelling in almost all medias. - Applications : chemical industries, oil production, process industries.	10 years
Carboxylated Nitrile X-NBR	-35 to +150°C	- Very good mechanical properties in hot temperature medias. - Resilience et flexibility in cold temperature lower than NBR. - Excellent abrasion resistance. - Excellente swelling resistance to hydro-carbons, alcohols, oils, greases. - Applications : belts in severe applications, duty shoes, hoses, automotive.	7 years
AFLAS	-15 to +210°C	- High heat resistance (peak usage up to 280°C). - Hight resistance to hydraulic oils, brake fluids, acids, steam, hot water. - Applications : petroleum, chemical, power generation, automotive.	10 years
Polyacrylate ACM	-15 to +150°C	- Resistance to heat, weathering and ozone. - Applications : automotive (for some lubricants in high temperatures).	7 years
Polyuréthane PU	-30 to +100°C	- Very good mechanical properties. - Excellent resistance to abrasion and tear. - Applications : hydraulic, abrasive media.	5 years
Butyl IIR	-15 to +150°C	- Low gas and steam permeability. - Good resistance to ageing and corrosive products.. - Good tensile strenght and elasticity . - Applications : gas (often replaced by EPDM)	7 years

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