AGLA
POWER TRANSMISSION



General Conditions

Due to exposure to temperature, and considering the passage of time, any type of rubber deteriorates, with consequent manifestations of loss of flexibility, cracks under bending, guaranteeing less and less resistance.
This aging can also lead to less resistance to other agents with which the rubber can come into contact, for example oil.

A fundamental aspect is therefore to preserve the material with adequate packaging, in dry and cool environments, limiting exposure to heat and light as much as possible.

When choosing the compound, in addition to the operating temperature, the type of fluid with which the part will come into contact must also be considered, because as a result of contact with the fluid it will be possible to change the characteristics of the elastomer, which will cause a change in the physical/mechanical characteristics; These factors represent another point to consider when selecting the rubber compound to be used, identifying the most suitable one for the required mission profile.

There are multiple parameters that affect the functionality of a dynamic application; among these, abrasion resistance. For example, a nitrile rubber has a better resistance to abrasion than a silicone rubber.

Other variables to consider are the geometric tolerances of the interfaces, vibrations, as well as everything related to the chemical compatibility of the compound with the fluid and the environment with which it comes into contact.

All elements must work harmoniously and be weighted and evaluated. A synergy that at Agla Power Transmission we always want to create, not only between the elements, but in the entire project carried out with and for the customer.

AGLA
POWER TRANSMISSION

ABBREVIATION	CHEMICAL TERMINOLOGY	FEATURES	OPERATING TEMP.	CHEMICAL RESISTANCE
NR	Natural Rubber	Excellent physical-mechanical properties. Very good elastic yield. Excellent abrasion resistance	-50 ÷ +80 °C	Moderate resistance to seawater, medium concentration acids
SBR	Butadiene styrene copolymer	Good physical-mechanical properties. Good abrasion resistance. Good resistance to deformation permanent	-40 ÷ +100 °C	Good resistance to some types of freon, glycols and brake fluids
EPM	Ethylene propylene copolymer	Excellent resistance to heat, ozone and high temperatures. High resistance to permanent deformation. Can only be vulcanized with peroxide	-45 ÷ +150 °C	Good resistance to water and glycols, aggressive chemicals and oxidation. Excellent resistance to Steam up to 150 °C
EPDM	Terpolymer ethylene propylene	Excellent resistance to heat, ozone and temperatures. High resistance to permanent deformation. Excellent resistance to water and steam up to 150 °C	-45 ÷ +150 °C	Good resistance to water and glycols, aggressive chemicals and oxidation. Excellent resistance to Steam up to 150 °C
CR	Polychloroprene	Good resistance to ozone and seawater. Good flame resistance and possible self-extinguishing. Good resistance to animal fats and vegetables	-45 ÷ +110 °C	Good resistance to grease, ozone, sunlight, weathering, flame and different types of Freon
NBR	Acrylonitrile butadiene copolymer	Good resistance to oils. Good physical-mechanical properties. Good to excellent waterproofing to air and gases	-40 ÷ +130 °C	Good resistance to oils, mineral, vegetable and animal fats, hydrocarbons and gases
HNBR	Hydrogenated Nitril	Excellent physical-mechanical properties. Excellent temperature resistance of 150 °C. Very high resistance to permanent deformation and abrasion resistant	-40 ÷ +150 °C	Excellent resistance to oils, mineral, vegetable and animal greases, hydrocarbons, gases and some types of Freon
CSM	Polyethylene chlorosulphate	Excellent physical-mechanical properties. Excellent resistance to flame, ozone, atmospheric agents and heat. Excellent air tightness and gases	-35 ÷ +120 °C	Excellent resistance to strong oxidizing chemical agents, strong acids and mineral bases, sea water, saline solutions, hypochlorites and alcohols

ACM	Ethylene acrylate copolymer	Excellent impermeability to air and gases. Excellent resistance to oils up to temperatures of 150 °C. Very good behaviour in the presence of ozone, weathering and UV radiation	-30 ÷ +150 °C	Excellent resistance to aliphatic oils, oxygen, ozone, atmospheric agents and heat, High temperature resistance
AEM	Ethylene-acrylic rubber	Excellent impermeability to air and gases. Low elastic yield. Excellent resistance to oils up to 170 °C and heat. Low permanent deformation values even at high temperatures	-30 ÷ +170 °C	Excellent resistance to aliphatic oils, oxygen, ozone, atmospheric agents and heat. High temperature resistance
EU	Polyether urethane rubber	Exceptional resistance to abrasion and tearing. Very good mechanical properties (load rupture and elongation). Good waterproofing to air, many gases and hydrolysis	-30 ÷ +100 °C	Good resistance to hydrolysis, saline solutions and seawater
AU	Polyester urethane rubber	Exceptional resistance to abrasion and tearing. Very good mechanical properties (load rupture and elongation). Good waterproofing to air, many gases and oils	-30 ÷ +100 °C	Good resistance to mineral and animal oils and fats, aliphatic hydrocarbons
ECO	Polyepichlorohydrins	Good flame resistance and good mechanical properties. Good flexibility at high and low temperatures. Excellent impermeability to air and gases. Excellent resistance to azono	-40 ÷ +135 °C	Good resistance to oils, vegetable and animal mineral fats and glycols
QMV	Silicone Polyvinylmethylsiloxane	Insensitivity to temperature changes. Excellent electrical insulation, with appropriate production processes: non-toxicity and possibility of degrees electrical and thermal conductive	-65 ÷ +200 °C	Good in water and aqueous solutions, exposure to atmospheric agents, ozone and U.V. rays, vegetable oils, Animals and glycols
PVMQ	Polyphenylvinylmethylsiloxane	Excellent resistance to very low temperatures	-100 ÷ -110 °C	Good in water and aqueous solutions, exposure to atmospheric agents, ozone and U.V. rays, vegetable oils, Animals and glycols
FVMQ	Fluorine Silicone Trifluoropropylmethylvenyl p-olisiloxane	Characteristics very similar to those of silicone but with higher chemical resistance than M15 lubricating oils, etc.	-55 ÷ +200 °C	Good in aliphatic and aromatic hydrocarbons, mineral oils, ozone and U.V. rays. Fair resistance in gasoline
FPM/FKM	Fluorine Silicone Trifluoropropylmethylvenyl p-olisiloxane Copolymers/terpolymers Hexafluoropropylene Vinylidene fluoride Tetrafluoroethylene.	Excellent resistance to chemicals, lubricants, heat and flame, exceptional permanent deformation behavior (compression set). Excellent behavior in ozone and U.V. rays.	-25 ÷ +280 °C	Particular chemical agents for which excellent resistance is ensured in a wide range of temperatures are: aliphatic, chlorinated and aromatic hydrocarbons, fuels, mineral and vegetable oils and fats, fluids plumbers in general
FFKM	Perfluoroelastomer Tetrafluoroethylene Perfluorinated Elastomer	Very high chemical inertness in the most aggressive environments including low weight aldehydes and ketones molecular	-125 ÷+310 °C	Great with low molecular weight aldehydes and ketones


AGLA
POWER TRANSMISSION