

GENERAL FEATURES OF THE RUBBER COMPOUNDS

COMMERCIAL NAME	INTERN. ABR.	VT ABR.	POSITIVE FEATURES	NEGATIVE FEATURES	COLOUR	OPERATION TEMPERATURE	HARDNESS	CHEMICAL RESISTANCE	FOOD STANDARDS	USE
NITRILE OR OILPROOF RUBBER	NBR	A	Excellent resistance to oil, heat, and age. Low permanent deformation and low gas permeability.	Limited resistance to ozone when not treated. Poor dielectric properties. Low impact strength.	Black	From -40 to + 130°C	60 ÷ 70° Sh.A	Resistance to mineral oil, hydrocarbons, water, steam, gas and vegetal oil.	Non-toxic vacuum cups can be produced upon request.	The excellent mechanical features of this compound allow the vacuum cups to resist tears, crushing, collisions, etc. They are suited for gripping metal and glass sheets, as well as loads with smooth surfaces.
BENZ RUBBER	XXXX	B	Excellent resistance to wear, ageing, oils containing chlorine, fats and petrol. Low permanent deformation. Does not leave stains on the gripping surface of the cups.	Poor dielectric properties. Low impact strength	Black Red	From -40 to + 170°C	60 ÷ 75° Sh.A	Resistance to mineral oil containing chlorine, hydrocarbons, water, steam, gas and vegetal oil.	Not recommended for producing non-toxic vacuum cups.	Vacuum cups made with this compound can resist tears, crushing, collisions, etc. They are suited for gripping metal and glass sheets, as well as loads with smooth surfaces. Particularly recommended for the AUTOMOTIVE sector.
STAIN RESISTANT BIOND RUBBER	XXXX	BA	Biond compound with good elastic yield and resistance to wear, tears and cuts. Does not leave stains on the gripping surface of the cups.	Low resistance to oil and heat.	Grey	From -30 to + 80°C	45 ÷ 60° Sh.A	Fair resistance to sea water, acids and medium concentration alkali.	Non-toxic vacuum cups can be produced upon request.	Vacuum cups made with this compound are suited for gripping marble, wood, glass, metal sheets, etc, without leaving stains or prints on the gripping surface.
ANTISTATIC NITRILE RUBBER	NBR-AS	AS	Excellent resistance to oil, heat, and ageing. Low permanent deformation. Highly conductive and antistatic compound.	Limited resistance to ozone when not treated. Low impact strength.	Black	From -40 to + 130°C	60 ÷ 70° Sh.A	Resistance to mineral oil, hydrocarbons, water, steam, gas and vegetal oil.	Not recommended for producing non-toxic vacuum cups.	Along with the normal use of NBR, vacuum cups made with this compound can be used in all those cases where it is necessary to dissipate electrostatic charges that may be on the gripping surface.
PARA RUBBER	NR	N	Excellent elastic yield and resistance to wear, tear and cuts. Excellent elongation to rupture.	Low resistance to oil and heat.	Black	From -70 to + 80°C	45 ÷ 50° Sh.A	Fair resistance to sea water, acids and medium concentration alkali.	Non-toxic vacuum cups can be produced upon request.	The flexibility of this compound allows the vacuum cups to grip rough and uneven surfaces. Suited for wood, cardboard, marble, bricks, glass and plastic.

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NATURAL RUBBER	NR	NG	Same compound as the one described above, not treated	Low resistance to ageing, oil and heat.	Beige	From -50 to + 70°C	40 ÷ 45° Sh.A	As NR described above.	Non-toxic vacuum cups can be produced upon request.	The great flexibility of this compound allows these vacuum cups to grip even the roughest and uneven surfaces. Vacuum cups made with this compound are recommended for gripping paper, cardboard, plastic, plastic films for packaging, etc.
GERANIUM FOAM RUBBER	NR	OF	Excellent elastic yield and resistance to tears. Excellent elongation to rupture.	Low resistance to ageing, oil and heat.	Orange	From -40 to + 80°C	25 ÷ 30° Sh.A	Fair resistance to sea water, acids and medium concentration alkali.	Not recommended for food use	The softness of the foam rubber allows making vacuum cups for gripping loads with raw or very rough surfaces.
SILICON	VMQ	S	Perfect behaviour at high and low temperatures. Conductive compound.	Low mechanical properties. It may leave stains on the vacuum cup gripping surface.	Neutral White Red	From -50 to +300°C	40 ÷ 45° Sh.A	Excellent resistance to chlorination, solvents, ozone, oxygen and UV rays.	Vacuum cups can be produced in compliance with FDA, BGA, TSCA food standards.	Silicon vacuum cups are used in food and electronics industries, in the packaging industry and in all those cases in which the contact surface has very high or very low temperatures.
ANTISTATIC SILICON	VMQ-AS	SAS	Perfect behaviour at high and low temperatures. Highly conductive and antistatic compound.	Low mechanical properties. It may leave stains on the vacuum cup gripping surface.	Neutral White	From -50 to + 200°C	40 ÷ 45° Sh.A	As the VMQ silicon compound.	Not recommended for food use	Vacuum cups in antistatic silicon are used in electronics and record industries and in all those cases in which electrostatic charges must be dissipated from the gripping surface.
STABILISED SILICON	VMQ-SS	SS	Perfect behaviour at high and low temperatures. Conductive and stain resistant compound. It does not leave stains or prints on the gripping surface.	Low mechanical properties.	Neutral White	From -50 to + 300°C	40 ÷ 45° Sh.A	As the VMQ silicon compound.	Vacuum cups can be produced for food use.	Vacuum cups in stabilised silicon are widely used in the ceramic industry and in all those cases in which, not only must they resist to high temperatures, but they must also not leave stains or prints on the gripping surface.
MAGNETIC SILICON	XXXX	SMG	Perfect behaviour at high and low temperatures. Conductive compound containing magnetically detectable ferrite powder.	Low mechanical properties. If not stabilised, it may leave stains on the vacuum cup gripping surface.	Reddish	From -50 to + 275°C	45 ÷ 50° Sh.A	Excellent resistance to chlorination, solvents, ozone, oxygen and UV rays.	The presence of ferrite in the silicon compound does not allow for certification in compliance with FDA, BGA, TSCA food standards.	Vacuum cups in magnetic silicon are used in the food industry and they are easily detected by the food protection metal detectors in case of rupture or accidental detachment.

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VITON®	FKM	V	Excellent resistance to Chemical attacks, lubricants and heat. Good compressive behaviour and elastic yield. It does not leave stains	Low resistance to alkali and ketones.	Green Brown	From -20 to + 300°C	50 ÷ 60° Sh.A	Excellent resistance to sunlight, flames and to high temperatures, as well as to aromatic and aliphatic hydrocarbons, aggressive chemicals and to chlorinated solvents.	Not recommended for producing non-toxic vacuum cups..	This compound is used to produce vacuum cups particularly suited for mechanical, petroleum, chemical, pharmaceutical, aviation and nuclear industries.
VULKOLLAN® POLYURETHANE	AU-EU	PU	High resistance to abrasion, traction, bending and oil. It does not leave stains	Low resistance to water, alkali, and to acids.	Ivory Blue	From -30 to + 100°C	60 ÷ 70° Sh.A	Excellent resistance to petroleum products.	Not recommended for producing non-toxic vacuum cups.	This compound is suited for producing vacuum cups subject to intense, continuous and heavy use.
DUTRAL®	EPDM	EPDM	Excellent resistance to weather agents, ageing and low temperatures.	Low elasticity	Black	From -60 to + 150°C	50 ÷ 70° Sh.A	Good resistance to aggressive chemicals and to oxygen.	Not recommended for producing non-toxic vacuum cups.	EPDM vacuum cups are recommended for machines operating outdoors in contact with weather agents or sea water. Excellent behaviour in contact with printing inks and solvents.
NEOPRENE®	CR	NE	Fair resistance to oil. Excellent resistance to ozone, sea water and to ageing. Good resistance to cuts, abrasions and combustion.	Low elastic yield. Risks of permanent deformations over time.	Black	From -20 to + 120°C	50 ÷ 70° Sh.A	Excellent resistance to petroleum products, sunlight, weather agents, ozone and to flames.	Not recommended for producing non-toxic vacuum cups.	Vacuum cups made with this compound are used in the electricity industry and in outdoor handling plants in contact with weather agents.
RUBBER FOAM NEOPRENE®	CR	NF	Fair resistance to oil. Excellent resistance to ozone, sea water and to ageing. Good resistance to cuts, abrasions and combustion.	Low elasticity. Tendency to deform over time.	Black	From -20 to + 80°C	30 ÷ 35 Sh.A	Excellent resistance to petroleum products, sunlight, weather agents, ozone	Not recommended for food use	The softness of this foam rubber allows making vacuum cups for gripping loads with raw or very rough surfaces, for outdoor applications in contact with weather agents.