Vacuum suction pads

The material is decisive

Material overview

Chemical designation	Nitrile rubber		Silicone rubber		Natural rubber	High temp. material	Polyurethane
Trade name	Perbunan (AS = antistatic)		Silicone (AS = antistatic)				
Abbreviation	NBR	NBR-AS	SI	SI-AS	NK	HT1	PU
Wear resistance	●●	●●	●	●	●●	●●●	●●●
Resistance to permanent deformation	●●	●●	●●	●●	●●●	●●	●
General weathering resistance	●●	●●	●●●	●●●	●●	●●●	●●●
Resistance to ozone	●	●	●●●●	●●●●	●●	●●●●	●●●
Resistance to oil	●●●●	●●●●	●	●	●	●●●●	●●●
Resistance to fuels	●●	●●	●	●	●	●●	●●
Resistance to alcohol, ethanol 96%	●●●●	●●	●●●●	●●	●●●●	●●●●	●●●●
Resistance to solvents	●●	●●	●●	●●	●	●●	●
General resistance to acids	●	●	●	●	●●	●	●
Resistance to steam	●●	●●	●●	●●	●	●●●	●
Tensile strength	●●	●●	●	●	●●	●●	●●●
Abrasion value in mm^3 to DIN 53516 (approx.)	100–120 at 55 Sh.	100–120 at 55 Sh.	180–200 at 55 Sh.	180–200 at 55 Sh.	100–120 at 40 Sh.	100–120 at 60 Sh.	60–80 at 55 Sh.
Specific resistance in [Ω · cm]	–	$\leq 10^7$	–	$\leq 10^7$	–	–	–
Short-term temperature* resistance in °C (< 30 sec.)	-30° to +120°	-30° to +120°	-50° to +220°	-35° to +220°	-35° to +120°	-30° to +170°	-40° to +130°
Longer-term temperature resistance in °C	-10° to +70°	-10° to +70°	-30° to +180°	-20° to +180°	-25° to +80°	-10° to +140°	-30° to +100°
Shore hardness to DIN 53505	40 to 90	55 ± 5	30 to 85**	55 ± 5	30 to 90	60 ± 5	55
Colour / coding	black, grey, blue, light blue	black	white, translucent	black	grey, light brown, black	blue	blue, green

* Approximate value: depends on ambient temperature, application force and recovery time

** After-bake of silicone 10 h/160 °C = + 5 . . . 10 Shore A

●●●● exellent ●●● very good ●● good ● poor to satisfactory

Selection aid for suction pad materials

Anwendungen	NBR	NBR-AS	SI	SI-AS	NK	HT1	PU
Branch-specific applications	Universal application	Universal application	CD/DVD Packaging Plastics	CD/DVD Packaging Plastics	Wood Packaging	Plastics	Packaging
Foodstuff quality			☑				
Oily workpieces	☑	☑				☑	☑
No marking of workpieces						☑	
Slight marking of workpieces	○	○	☑	☑	☑		☑
Higher temperatures			☑	☑		☑	
Lower temperatures			☑	☑	☑		
Very heavy loads							☑
Very smooth surfaces (glass)	☑						☑
Rougher surfaces (wood, stone)					☑		☑

○ grey version with little marking

Vacuum suction pads

The material is decisive

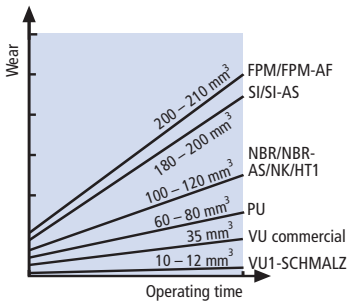
Material overview

Vulkollan	Polyvinyl chloride	Fluorcaoutchuc (AF = no making)		Chloroprene	Ethylene-propylene-rubber
VU 1	PVC	FPM	FPM-AF	CR	EPDM (foam r.)
●●●●	●●●	●	●	●●	●
●●	●	●●●	●●●	●●	●●
●●●	●●	●●●●	●●●●	●●●	●●●●
●●●	●●●	●●●●	●●●●		
●●●	●●●	●●●●	●●●●	●●●	●●●●
●●	●	●●●●	●●●●	●●●	●●***
●●●●	●	●●	●●	● ●●●●	● ●●●●
●	●	●●●	●●●		
●	●●	●●●	●●●	●● ●●	●● ●●●
●	●●●	●●	●	●●	●●●
●●●●	●●	●●	●●	●●	●
10–12 at 72 Sh.	100–120 at 50 Sh.	200–210 at 65 Sh.	200–210 at 65 Sh.	120–140 at 60 Sh.	Not suitable for foam rubber
–	–	–	–	–	–
-40° to +100°	-30° to +65°	-10° to +250°	-10° to +250°	-40° to +100°	-35° to +130°
-40° to +80°	-15° to +50°	-10° to +200°	-10° to +200°	-20° to +70°	-25° to +100°
72	50	65 ± 5	65 ± 5	20–60	~15****
dark green	blue, translucent	black	black	black, grey	black

*** With slight oil wetting
**** Varies, for technical reasons, for foam rubber

The application and the ambient conditions are decisive for the selection of the appropriate suction pad material. In many cases, for example, the application demands resistance to abrasion, resistance to oil or suitability for use with foodstuffs.

The overview summarizes the properties of various suction pad materials and shows typical applications for which the materials are particularly suitable.



Note: we recommend the use of commercially available soap solution for cleaning suction pads

Selection aid for suction pad materials

VU 1	PVC	FPM	FPM-AF	CR	EPDM (foam r.)
Metal Wood Packaging	Packaging CD/DVD	Typical application for high temperature	Typical application for high temperature	Metal Wood	Metal Wood
☑	☑	☑	☑		
			☑		
☑				☑	
		☑	☑		
☑	☑				
☑		☑	☑		
☑					☑