

Vetter resistance charts

Transparency for your safety.

Since your products have to withstand thermal as well as chemical requirements, Vetter gives you detailed resistance information.

The data is based on laboratory tests, experience and are influenced by such factors as temperature, intensity, length of exposure etc.

These symbols indicate degrees of resistance:

- + resistant
- not-resistant
- o conditionally resistant
- k. A. no details

Please notice:

An expanding material reacts to chemicals a lot quicker than when it is in the non-operative condition. This means, the greater the expansion, the lower the chemical resistance. Resistance also depends on material thickness, which is attributable to diffusion. Because of that, our resistance list can only give you points of reference.

We will gladly provide material samples to users wishing to conduct their own chemical resistance tests.

Temperature resistance limits

Products	Cold resistance	Cold flexible	Heat resistance, long term	Heat resistance, short term
Mini Pipe Sealing Bags Mini Test Sealing Bags Pipe Sealing Bags 1.5 bar (21.75 psi) Pipe Sealing Bags 2.5 bar (36.25 psi) Test Sealing Bags 1.5 bar (21.75 psi) Test Sealing Bags 2.5 bar (36.25 psi) Bypass Bags 1.5 bar (21.75 psi) Pipe Sealing Bags CR High Pressure Pipe Sealing Bags Egg profile Sealing Bags 1.5 bar (21.75 psi) Egg profile Testing Bags 1.5 bar (21.75 psi) Short packers Lateral packers Flexible packers	-40 °C	-20 °C	+90 °C	+115 °C
Pipe Sealing Bags 0.5 bar (7.25 psi) Test Sealing Bags 0.5 bar (7.25 psi) Egg profile Sealing Bags 1 bar (14.5 psi) Egg profile Testing Bags 1 bar (14.5 psi) Egg profile Bypass Bags 1 bar (14.5 psi)	-40 °C	-20 °C	+70 °C	+85 °C
Rubber hoses	-40 °C	-30 °C	+90 °C	--
Controller: plastic, aluminium- and fitting	-20 °C	--	+50 °C	--

Material list

Products	Material	Support material
Mini Pipe Sealing Bags High Pressure Pipe Sealing Bags Egg profile Sealing Bags 1.5 bar (21.75 psi) Egg profile Sealing Bags 1.5 bar (21.75 psi) Short packers Lateral packers Flexible packers	NR	Nylon cord
Mini Test Sealing Bags	NR	NR
Pipe Sealing Bags 1.5 bar (21.75 psi) Pipe Sealing Bags 2.5 bar (36.25 psi) Test Sealing Bags 1.5 bar (21.75 psi) Test Sealing Bags 2.5 bar (36.25 psi) Bypass Bags 1.5 bar (21.75 psi)	NR	Nylon cord/Aramid
Pipe Sealing Bags 0.5 bar (7.25 psi) Test Sealing Bags 0.5 bar (7.25 psi) Egg profile Sealing Bags 1 bar (14.5 psi) Egg profile Testing Bags 1 bar (14.5 psi) Egg profile Bypass Bags 1 bar (14.5 psi)	CR/NR	Nylon cord/Aramid
Pipe Sealing Bags CR	CR	Nylon cord
Inflation hoses and air supply hoses (outside)	EPDM	Polyester

Resistance charts

Description of material	CR	NR	NBR	EPDM	Description of material	CR	NR	NBR	EPDM
Aceton	o	+	-	-	Carbon dioxide	+	+	+	+
Acetylene	+	+	+	-	Carbon monooxide	+	+	+	+
Alum, watery	+	+	n. d.	-	Copper sulphate	+	+	+	+
Aluminium chloride	+	+	+	+	Adhesive	+	+	+	+
Anilene	-	n. d.	-	n. d.	Methyl chloride	-	-	-	o
ASTM-oil 1	o	-	+	-	Sea water	+	+	+	n. d.
Petrol	o	-	o	n. d.	Mineral oil	+	-	+	-
Benzene	-	-	-	-	Sodium carbonate	+	+	+	-
Boric acid	+	+	+	+	Ozone	+	-	o	+
Bromine (moist)	-	-	-	-	Paraffin	+	-	o	-
Butyric acid	-	-	-	n. d.	Perchloric acid	o	n. d.	o	+
Chlorine gas (moist)	-	-	-	n. d.	Phenol (watery)	-	-	-	+
Chlorine (wet)	o	-	-	o	Phosphoric acid (concentrated)	-	-	+	-
Diesel fuel	o	-	o	-	Mercury	+	+	n. d.	+
Iron chloride	+	+	+	+	Nitric acid (fuming)	-	-	-	-
Petroleum	o	-	+	-	Sulphur dioxide (dry)	-	o	o	n. d.
Acetic acid	o	+	+	o	Sulphur acid (50 %)	+	-	+	-
Fatty acid	+	o	o	-	Nitrogen	+	+	o	+
Formaldehyde	+	+	+	+	Carbon tetrachloride	-	-	o	-
Glucose	+	+	o	+	Animal fat	+	-	o	+
Heating oil	+	-	o	-	Toluene	-	-	-	-
Potassium chloride	+	+	o	+					
Calcium chloride	+	+	o	+					
Calcium nitrate	+	+	n. d.	+					

+ resistant o conditionally resistant - not-resistant n. d. no details