

EPDM

Color - black

EPDM is an elastomer based on Ethylene-Propylene-Diene rubber. EPDM has an exclusive resistance to hot water, steam, detergents and polar organic solvents. EPDM can also be used in glycol based break fluids; herewith the state standards should be followed.

EPDM - filled with soot and is not suitable for electrical insulation

EPDM is not resistant to mineral oils

EPDM has an excellent mechanical properties and very wide temperature range: from -50°C up to +150°C (hot steam up to +180°C). Due to very saturated structure EPDM has a very good ozone, weather and ageing resistance. Mineral oils and lubricants, as well as organic oils and adipose, causes severe swelling. Special structure of softeners allows the usage of EPDM in break fluids based on glycol (SL-DOT4). For this purpose local standards supposed to be followed and the procedure should be authorized. Gas permeability is rather high, as well as radiation exposure resistance.

Resistance

Good resistance	Medium resistance	Low resistance
Hot water and steam up to +180°C	Silicone oil and grease (can cause reduction)	Aliphatic hydrocarbons (propane, butane, petrol)
Fire-resistant hydraulic fluids HFD-R	–	Mineral oils and adipose
Detergents, sodium and potassium alkali	–	Aromatic and chlorinated hydrocarbons.
Organic and inorganic acids and basis	–	Adipose and vegetable oils
Saline and oxidizing environments	-	biodegradable hydraulic fluids
Fire-resistant hydraulic fluids HFC (glycol water, only if mineral oils are absents)	–	Fire-resistant pneumatic fluids HFA, HFB и HFD-S
Big amount of solvents (ketone, esters, alcohols)	–	–
Break fluids based on glycol	–	–

Application

EPDM can be used for production of U-shaped seals, lip and chevron seals. EPDM is mainly used in cleaning equipment (washing powder, sodium alkali). Moreover, EPDM is the most applicable material for usage in hot water or hot steam (silicone grease lubrication).

Mainly used

- Special parts for cleaning equipment
- Piston and rod seals
- O-rings
- Seals for vehicle break system

EPDM Material Data Sheet

Properties	Value	Unit	Standard
Hardness	85 +/-3	Sh A	DIN 53505
Density	1,22	g/cm ³	DIN 53479 or DIN EN ISO 1183-1
Compression set 23°C / 72 h	11,3	%	DIN 53517 or DIN ISO 815-1
Compression set 70°C / 24 h	16,1	%	DIN 53517 or DIN ISO 815-1
Compression set 100°C / 24 h	13,2	%	DIN 53517 or DIN ISO 815-1
100 % modulus	9,7	MPa	DIN 53504
Rebound resilience	36	%	DIN 53512
Tensile strength	14,4	MPa	DIN 53504
Elongation at break	137	%	DIN 53504
Tear strength	5	N/mm	DIN 53515 or DIN ISO 34-1 A
Abrasion	120	mm ³	DIN 53516
Min. service temperature	-50	°C	
Max. service temperature	+170	°C	