MATERIAL DATASHEET

Creator: PFR

05-70-0111

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EPDM - ethylene propylene diene rubber

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Description

Ethylene propylene diene rubber EPDM is produced by copolymerizing ethylene, propylene and a diene. The diene component contains double bonds in the side chain that allow crosslinking with sulphur. In many cases, an organic peroxide crosslinker is used for EPDM. The absence of the double bond in the main chain results in good oxygen, ozone and temperature resistance. Sulphur crosslinking in EPDM results in a poorer compression set DVR. Special lubricants (e.g. silicone grease) must be used to lubricate the elastomer parts used, not mineral oils or greases.

Properties

- ☐ Very good resistance to ozone, ageing and weathering
- ☐ Above-average resistance to chemicals
- ☐ Hot water resistant up to +130 °C

Typical applications

- ☐ Household appliances
- ☐ Sanitary applications
- ☐ Automotive engineering

Further information

- ☐ Peroxide crosslinking

Technical data			
Color			black
Hardness	ASTM D 2240	Shore A	70 ± 5
Specific density	ASTM D 1817	g/cm³	1.13 ± 0.03
Tensile strength	ASTM D 412 C	MPa	14
Elongation at break	ASTM D 412 C	%	160
Tear resistance	ASTM D 624 B	N/mm	32
Compression set during 22 h at +150 °C	ASTM D 395 B 25 % deformation	%	15
Compression set during 70 h at +150 °C	ASTM D 395 B 25 % deformation	%	27
Temperature		°C	-55 to +150
Temperature retraction TR10	ASTM D 1329	°C	-46

Conformities

- ☐ FDA compliant 21 CFR § 177.2600
- ☐ 3-A Sanitary Class II
- ☐ (EC) No. 1935/2004
- ☐ NSF/ANSI 51
- ☐ WRC/WRAS-Freigabe BS 6920
- ☐ DVGW Arbeitsblatt W270
- ☐ NSF/ANSI/CAN 61
- ☐ ACS-compliant AFNOR
- ☐ ÖNORM B 5014-1
- ☐ KTW-BWGL
- ☐ DIN EN 681-1 WA-WB-WC-WD
- ☐ DIN EN 16421
- ☐ USP Class VI
- ☐ REACH (1907/2006)
- ☐ RoHS (2011/65/EU)
- ☐ ADI-free
- ☐ Phthalate free

Reference to the author/disclaimer

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