EPDM 70.502-03

Angst+Pfister

Sealing technology
Technical Data Sheet

Material name, short description	EPDM
Material name, based on technical standards	Ethylene-propylene-diene rubber
Material description / intended use	Elastomer with good resistance to hot water and vapour as well as UV and ozone.
Color	black
Compound code	EPDM 70.502-03
Old, but still valid compound code	EPDM 70.10-16 / EPDM 70.502-02
Crosslinking/curing agent	Peroxide
Remarks	ASTM code: D2000 M3 DA 714 A26 B36 EA14 F19 G11 G21

Mechanical properties

Hardness nominal	70 ±5 Shore A
Density nominal	1.15 ±0.03 g/cm³
Tensile strength	14 N/mm² ASTM D 412-C
Elongation at break	245 % ASTM D 412-C
Compression set	9 % ASTM D 395-B 22 h, 150 °C
	19 % ASTM D 395-B 70 h, 150 °C
	9 % ISO 815-B 24 h, 150 °C
Tear resistance	27 N/mm ASTM D 624-B

Thermal properties

Operating temperature min.*	-51 °C
Operating temperature max.*	150 °C
TR 10 value	-51 °C ASTM D 1329
Brittleness point	-60 °C

** Approximate value, dependent on the application*

Storage in medium 1

Medium	Water ASTM
Test parameter	70 h, 100 °C
Test standard	ASTM D 471
Value change	Volume: +2 %

Storage in medium 2

Medium	TOP 4
Test parameter	70 h, 100 °C
Test standard	ASTM D 471
Value change	Hardness: -5 Tensile strength: -10 % Elongation at break: -11 % Volume: +1 % Weight: +1.2 %

In compliance with **RoHS** and **REACH** directives.
This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.

Storage in medium 3

Medium	DOT 4
Test parameter	70 h, 150 °C
Test standard	ASTM D 471
Value change	Hardness: -6 Points Tensile strength: -9 % Elongation at break: -10 % Volume: +2 %

Storage in medium 4

Medium	Cloramine / Dist. Water (1ml/999ml)
Test parameter	168 h, 65 °C
Test standard	ASTM D 471
Value change	Hardness: 0 Points Tensile strength: +8 % Elongation at break: +6 % Volume: -4.1 %

Storage in medium 5

Medium	Cloramine / Dist. Water (1ml/999ml)
Test parameter	336 h, 65 °C
Test standard	ASTM D 471
Value change	Hardness: -1 Points Tensile strength: +7 % Elongation at break: +3 % Volume: +0.5 %

Air aging 2

Test parameter	100 h, 125 °C
Test standard	DIN 53504
Value change	Hardness: +3 Points Tensile strength: -12 % Elongation at break: -15 %

Air aging 1

Test parameter	70 h, 150 °C
Test standard	ASTM D 573
Value change	Hardness: +4 Points Tensile strength: -10 % Elongation at break: -5 %

Ozone test

Ozone concentration	200 pphm
Duration of test	72 h
Temperature during test	50 °C
Elongation during test	50 %
Relative humidity during test	72 %
Test result	PASSED

In compliance with **RoHS** and **REACH** directives.
This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.

Approvals / Compliance

Drinking water	NSF 61 for drinking water cold and warm up to 82 °C
	ACS (DGS/VS4 n° 99/217 dated 12/04/1999 and DGS/VS4 n° 2000/232 dated 27/04/2000
	D.M. 06/04/04 n° 174
	DVGW EN 681-1 WA-WB-WC-WD
	DVGW W270 for drinking water
	DVGW W534 cold and warm drinking water
	UBA Elastomer-Guideline cold water (23°C) and hot water up to 85°C
	WRAS (BS 6920) for drinking water cold and warm up to 85°C
Food & Bevarage	FDA CFR 21 - 177.2600 a) - f)
	NSF 51 for food
	EC 1935/2004 (excl. article 15, based on FDA) and EC Regulation 2023/2006 (GMP)
	GB 4806.11-2016 (Migration test)
	Mercosur GMC/RES N° 28/99 (Positive List)
Others	ADI free (free of Animal Derived Ingredients) resp. TSE/BSE related substances
	DEHP, free of Phthalates

EC No.1935:2004

In compliance with **RoHS** and **REACH** directives.
This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.