



AP 302 – EPDM material for use in the food and pharmaceutical industries

There are particular requirements which need to be met for the use of precision O-rings in the food and pharmaceutical as well as in the biotechnology industries. The EPDM material HygienicSeal AP 302 from COG has two of the most important approvals for these areas: it passes the clearance test for harmless products according to FDA 21. CFR 177.2600, and has been given a release certificate in accordance with USP Class VI, Chapter 87 and Chapter 88. Here the material was tested up to +121 °C and not, as is usually the case in the market, only up to +70 °C. This ensures additional safety when used in critical areas. Furthermore, AP 302 is compliant to 3-A Sanitary Standard 18-03 and has successfully been tested to WFI water.

HygienicSeal AP 302 has been designed especially for use with liquid or fatty media. The sealing material is very well suited for an operating temperature range of -40 °C to +150 °C, and in particular also in the case of contact with CIP/SIP media. This means AP 302 provides great flexibility when used in different production processes in the pharmaceutical and food industries.

Properties of AP 302

- EPDM terpolymer, peroxidically crosslinked
- Hardness: 70 Shore A
- Operating temperature range: -40 °C to +150 °C
- Compression set: 12 %
- Certificate according to FDA 21. CFR 177.2600
- Certificate according to USP class VI to +121 °C and 3-A Sanitary Standard 18-03
- Very good resistance in the CIP/SIP processes
- WFI water tested



HygienicSeal AP 302 – ideal EPDM material including for use in the CIP process

To meet the exceptionally high requirements of the food and pharmaceutical industries, COG has developed its HygienicSeal product line – the seal of quality and safety. Conventional O-ring materials cannot be used in these applications because the legally stipulated approvals are missing. The seals used here also have to resist the interactions occurring in the production process. The cleaning cycles in the CIP/SIP processes in particular place the highest demands on the seals used there.

Many of the seals used fail here entirely or can remain without leaks only for short periods. The sealing material HygienicSeal AP 302, however, can withstand longer usage times and also stands out thanks to its hardness of only 70 Shore A with a very low compression set of 12 % (22 h / 100 °C). It therefore has the ideal requirements for use in these industries.



WERKSTOFFDATEN

COG-No.:	AP 302
Basic elastomere:	Ethylene propylene diene rubber (EPDM)
Colour:	black
Temperature range (air):	from -40 °C to +150 °C
Approvals / Certifications:	FDA 21. CFR 177.2600, USP Class VI to +121 °C, Chapter 87 and Chapter 88, 3-A Sanitary Standard 18-03, Class 2

Rubber technology data

Properties	Unit	Value	Testing methods
Hardness:	Shore A	70 ± 5	DIN ISO 7619-1
	°IRHD, CM	70 +3/-8	DIN ISO 48
Tensile strength:	MPa	> 9	DIN ISO 53504
Elongation:	%	> 200	DIN ISO 53504
Compression Set:			
	(22 h / 100 °C)	%	< 12
(22 h / 150 °C)	%	< 20	DIN ISO 815

The indicated values do not replace the official data sheet. They are not binding and exclude all liability for damage of any kind.

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SIP = Sterilisation in place
CIP = Cleaning in place
WFI = Water for Injection

