



Material

AFM 34 is an asbestos free gasket material. It consists of aramide fibers, inorganic fillers and asbestos substitutes that are resistant to high temperatures. These are firmly bonded to high grade elastomers under elevated pressure and temperature to achieve exceptionally high gas sealability.

Properties

- Does not contain any physiologically harmful substances or colour pigments.
- Exhibits high tensile strength plus stress and shearing resistance.
- The material is ideally suited for sealing gases and fluids, e.g. oils, solvents, fuels, freons, liquid gases, water/ antifreeze mixtures, saline solutions and many other media. It is also suitable for sealing hot water and steam up to approx. 200 °C in stationary applications and with an installation surface pressure of at least 50 N/ mm². Please consult us for a specific application.

Other characteristic properties of the material are excellent temperature resistance, stress resistance under high operating pressure, and ease of handling. In most cases, AFM 34 can be used to replace CAF materials without problems within a temperature range of up to 200 °C.

Application

- DIN and ASME flanged joints, apparatus, pumps, fittings and pipelines in industrial plants
- Fittings with very narrow sealing surfaces, e.g. in gas and hot water units, solar panels, convection radiators and couplings, etc.

- Sealed joints in IC engines subject to high mechanical and thermal stress (oil filters, intake manifolds, water, fuel & vacuum pumps, etc.)
- Transmissions, gearboxes, refrigerating & air compressors, etc.

Since AFM 34 is physiologically safe, it is particularly suitable for use in contact with drinking water & foodstuffs, and for sealing highly pure, pollutant- sensitive products such as paint bases, vitamins, etc

Surfaces

As standard, both sides of AFM 34 are coated with a non- stick, highfriction layer that greatly facilitates disassembly. In most cases, additional surface treatment is unnecessary. However, a graphite coating on one or both sides of the gasket is required when used with components that rotate on the gasket during

assembly, e.g.in threaded couplings, radiator plugs, etc., as a low friction value is required in these cases.

Approvals

- DIN- DVGW
- SVGW
- FDA- compliant

- KTW/ DVGW- Arbeitsblatt W270
- WRAS

- Vienna Institute for Food Analyses
- Hungarian drinking water approval
- ÖVGW Quality Mark
- VP 401
- HTB

- Fire Safe
- BAM

- Grade X
- UVV 61

- TA Luft
- Germanischer Lloyd

Acc. to DIN 3535, part 6 FA
Swiss Gas And Water Society
Acc. to 21 CFR § 177.2600 – suitable for flat gaskets with all types of foodstuffs
Plastics in contact with drinking water
Certification of gasket materials for use in drinking water (acc. to British Standard BS 6920)

Gaskets with higher thermal resistance
Higher thermal resistance acc. to DIN 3374/3376 (0.1 and 1.0 bar at 650 °C for 30 minutes)
Acc. to British Standard BS 6755
German Federal Institute for Materials Research and Testing, flanged joints in oxygen- conducting steel pipes up to 100 bar and 80 °C
Acc. to BS 7531
"Gases", AD- B7 (VdTÜV) in conjunction with metal inner eyelet, blowoutproof gasket
High-quality gasket (200 °C for 48 h and 2000 h)
Approval for shipbuilding

Density	g/cm ³	1.8 - 2.0
Ignition loss acc to DIN 52 9	11 %	< 34
Tensile strength		
acc. to ASTM F 152 accross gain	N/mm ²	> 18
acc. to DIN 52 910 accross gain	N/mm ²	> 12
Residual stress acc. to DIN 52 913		
16 h, 300 °C	N/m m ²	≈ 25
16 h, 175 °C	N/m m ²	≈ 36
Compressibility and recovery		
acc. to ASTM F 36, procedure J		
compressibility	%	5 - 8
recovery	%	> 55
Sealability against nitrogen		
acc. to DIN 3535, part 6 FA	mg/ (s·m)	≈ 0.02
Swelling acc. to ASTM F 146		
in IRM 903 Oil (replaces ASTM Oil No. 3)		
5 h, 150 °C		
increase in thickness	%	< 7
increase in weight	%	< 7
in ASTM Fuel B		
5 h, room temp.		
increase in thickness	%	< 10
increase in weight	%	< 10
in water / antifreeze (50:50)		
5 h, 100 °C		
increase in thickness	%	< 10
increase in weight	%	< 10

Content of water- soluble chloride	ppm	< 100
Iron content	%	< 0.3
Thermal conductivity	W/ (m·K)	≈ 0.7
Dielectric strength		
after storage at 50% relative		
humidity,	48 h kV/ m m	≈ 20
at 300 °C,	4 h kV/ m m	≈ 30
Electrical specific resistance		
after storage at 55% relative		
humidity,	48 h Ω·cm	≈ 1 x 10 ¹²
at 120 °C,	1 h Ω·cm	≈ 2 x 10 ¹³
Short- term peak temperature	°C	400
Max. continuous temperature	°C	250
with steam up to	°C	200
with metal inner bead (AFM 34 CO ME)		
with steam up to	°C	220
Max. operating pressure bar 150		

Max. continuous temperature and max. pressure must not occur simultaneously, please refer to the table entitled

"Max. operating pressures at various temperatures and with various media".

DIN 28091-2:		
Cold creep ϵ_{KSW}	%	5 - 8
Cold recovery ϵ_{KRW}	%	3 - 5
Hot creep during service $\epsilon_{WSW/ T}$	%	9 - 12
Hot recovery $\epsilon_{WRW/T}$	%	$\approx 0,9$
Recovery R	mm	$\approx 0,016$
Specific leakage rate λ	mg/(s·m)	< 0,1
Media resistance see "AFM 34: Resistance to chemical media"		
Residual surface pressure after 1000 h (in air at 100 °C)	%	> 50
Sealing parameters: see corresponding table.		

Characteristics acc. to EN 13555 are available on request.

Form of delivery

Gaskets according to a drawing, dimensions supplied, or other arrangement.

Sheets 1500 x 1500 mm (standard size)

Nominal thicknesses and tolerances acc. to DIN 28091-1 (mm)

Dimensional limits within a shipment

0.30 \pm 0.10 0.50 \pm 0.10

0.75 \pm 0.10 1.00 \pm 0.10

1.50 \pm 0.15 2.00 \pm 0.20

3.00 \pm 0.30 4.00 \pm 0.40

5.00 \pm 0.50

Max. thickness variation in a sheet:

0.1 mm for sheet thickness \leq 1.00 mm, and 0.2 mm for thickness >1.00 mm

Waranty exclusion

In view of the variety of different installation and operation conditions as well as application process engineering options, the information given in this datasheet can only provide approximate guidance and cannot be used as basis for warranty claims.