AFM 34

Technical Data Sheet 334
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Material	**AFM 34** is an asbestos- free gasket material. It contains aramide fibers, inorganic fillers and other high- temperature resistant substances which are bonded with high- quality elastomers with high strength and especially gas- tight under increased pressure and increased temperature.
Properties	**AFM 34** does not contain any physiologically harmful substances or colour pigments.

AFM 34 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 if you have a specific application.

Other characteristic properties of the material are excellent temperature resistance, stress resistance under high operating pressure, and ease of handling. |
| **Application** | • for DIN and ANSI flanged joints, apparatus, pumps, fittings and pipelines in industrial plants
• for fittings with very narrow sealing surfaces, e.g. in gas and hot water units, solar panels, convection radiators and couplings, etc.
• for sealed joints in IC engines subject to high mechanical and thermal stress (oil filters, intake manifolds, water, fuel & vacuum pumps, etc.)
• for transmissions, gearboxes, refrigerating & air compressors, etc.

Since **AFM 34** is physiologically safe, it is also 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, high- friction 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 recommended 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**
	(acc. to DIN 3535, part 6 FA)

FDA- compliant

acc. to 21 CFR § 177.2600 – suitable for flat gaskets with all types of foodstuffs

WRAS

Certification of gasket materials for use in drinking water (acc. to British Standard BS 6920)

DIN 30653 (formerly VP 401)

Gaskets with higher thermal resistance (HTB)

Fire Safe

acc. to BS 6755 and API 6FB

BAM

German Federal Institute for Materials Research and Testing,
flanged joints in oxygen- conducting steel pipes up to 100 bar and 80 °C

Grade X

acc. to BS 7531

UVV 61

"Gases", AD- B7 (VdTÜV) in conjunction with metal inner eyelet, blowout- proof gasket

TA Luft

High- quality gasket (200 °C for 48 h and 2000 h)

Germanischer Lloyd (DNV GL)

Approval for shipbuilding

AFM 34

Technical Data
(nominal thickness 2.00 mm)

Property	Unit	Value
Density	g/ cm³	1.8 - 2.0
Ignition loss acc to DIN 52 911	%	< 34
Tensile strength		
acc. to ASTM F 152 accross grain	N/ mm²	> 18
acc. to DIN 52 910 accross grain	N/ mm²	> 12
Residual stress acc. to DIN 52 913		
16 h, 300 °C	N/ mm²	≈ 25
16 h, 175 °C	N/ mm²	≈ 36
Compressibility and recovery		
acc. to ASTM F 36, procedure J		
compressibility	%	5 -
recovery	%	8 >
Sealability against nitrogen		55
acc. to DIN 3535, part 6 FA		
Swelling acc. to ASTM F 146		
in IRM 903 Oil (replaces ASTM Oil No. 3)		
5 h, 150 °C	mg/ (s·m)	≈ 0.02
increase in thickness		
increase in weight		
in ASTM Fuel B		
5 h, room temp.		
increase in thickness	%	< 7
increase in weight	%	< 7
in water / antifreeze (50:50)		
5 h, 100 °C		
increase in thickness	%	< 10
increase in weight	%	< 10
Content of water- soluble chloride		
Thermal conductivity		
Dielectric strength	%	< 10
after storage at 50% relative	%	< 10
humidity, 48 h		< 100
at 300 °C, 4 h	ppm	≈ 0.7
Electrical specific resistance	W/ (m·K)	
after storage at 55% relative		
humidity, 48 h		
at 120 °C, 1 h		
Short- term peak temperature	kV/ mm	≈ 20
	kV/ mm	≈ 30
	Ω·cm	≈ 1 x 1012
	Ω·cm	≈ 2 x 1013
	°C	400
	°C	250
	°C	200
Maximum **continuous temperature**	°C	220
with steam up to	bar	150
with metal inner bead (AFM 34 CO ME)		
with steam up to		
Maximum **operating pressure**		

⚠ **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 εKSW	%	5 - 8
Cold recovery εKRW	%	3 - 5
Hot creep during service εWSW/ T	%	9 - 12
Hot recovery εWRW/ T	%	≈ 0.9
Recovery R	mm	≈ 0.016
Specific leakage rate λ	mg / (s·m)	< 0.1

Media resistance
see "AFM 34: Resistance to chemical media"

Residual surface pressure

	%	> 50

after 1000 h (in air at 100 °C)

Sealing parameters: see corresponding table.

Characteristics acc. to EN 13555 are available on request.

The data quoted above are valid for the material "as delivered" without any additional treatment. In view of the countless possible installation and operating conditions, definitive conclusions cannot be drawn for all applications regarding the behaviour in a sealed joint. Therefore, we do not give any warranty for technical data, as they do not represent assured characteristics. If you have any doubt, please contact us and specify the exact operating conditions.

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	±0.10
0.50	±0.10
0.75	±0.10
1.00	±0.10
1.50	±0.15
2.00	±0.20
3.00	±0.30
4.00	±0.40
5.00	±0.50

Max. thickness variation in a sheet:

0.1 mm for sheet thickness ≤1.00 mm, and 0.2 mm for thickness >1.00 mm

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