

Technical Data Sheet

MATERIAL PROPERTIES*: Reinz AFM-34

Material AFM 34 is an asbestos- free gasket material. It contains aramid fibres, inorganic fillers and other high- temperature resistant substances which are bonded 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.

Other characteristic properties of the material are excellent temperature resistance, stress resistance under high operating pressure, and ease of handling.

Applications

- 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.

Asbestos Free



Certificate Number: 14352
ISO 9001



Care should be taken in selecting the most suitable quality for each application. Advice is available, but final responsibility remains with the customer.

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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)
- **VP 401 (HTB)** Gaskets with higher thermal resistance
- **Fire Safe** acc. to British Standard BS 6755
- **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

Technical Data (nominal thickness 2.00 mm)

Density	g/ cm ³	1.8 - 2.0
Ignition loss acc to DIN 52 911	%	< 34
Tensile strength		
acc. to ASTM F 152 across gain	N/ mm ²	> 18
acc. to DIN 52 910 across gain	N/ mm ²	> 12
Residual stress acc. to DIN 52 913		
16 h, 300 °C	N/ mm ²	≈ 25
16 h, 175 °C	N/ mm 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

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increase in weight in ASTM Fuel B 5 h, room temp.	%	< 7
increase in thickness	%	< 10
increase in weight in water / antifreeze (50:50) 5 h, 100 °C	%	< 10
increase in thickness	%	< 10
increase in weight	%	< 10
Content of water- soluble chloride	ppm	< 100
Thermal conductivity	W/ (m·K)	≈ 0.7
Dielectric strength after storage at 50% relative humidity, 48 h	kV/ mm	≈ 20
at 300 °C, 4 h	kV/ mm	≈ 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
Maximum continuous temperature with steam up to	°C	250
with metal inner bead (AFM 34 CO ME)	°C	200
with steam up to	°C	220
Maximum operating pressure	bar	150
 <p>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".</p>		
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



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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.

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.

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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