

**AFM 31****AFM 31****Technical Data Sheet 331 (previously TDS 272)**

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Material	AFM 31 is an asbestos-free gasket material. It is composed of aramide fibers and other asbestos substitutes which are resistant to high temperatures. These substitutes are processed with high-grade elastomers under elevated pressure and temperature.
Properties	AFM 31 is a highly conformable gasket material featuring high compressibility and flexibility plus very good sealability against fluids and gases.
Application	<ul style="list-style-type: none">• for sealed joints on lightweight components where surface pressure is relatively low, e.g. on valve covers, oil pans, covers, in IC engines, compressors, pipelines, apparatus and transmissions.• for sealing engine, transmission, hydraulic, and refrigerating oils• for sealing fuels, water, mixtures of water and antifreeze & corrosion inhibitors.
Surfaces	As standard, both sides of AFM 31 are coated with a non-stick, high-friction layer that greatly facilitates disassembly. In most cases, additional surface treatment is unnecessary.



AFM 31

Technical Data
(nominal thickness
2.00 mm)

Density	g/ cm ³	1.4 - 1.7
Ignition loss acc. to DIN 52 911	%	< 45
Tensile strength acc. to ASTM F 152 across grain acc. to DIN 52 910 across grain	N/ mm ² N/ mm ²	> 8 > 6
Residual stress acc. to DIN 52 913 16 h, 175 °C	N/ mm ²	≈ 24
Compressibility and recovery acc. to ASTM F 36, procedure J compressibility recovery	% %	14 - 23 > 50
Sealability against nitrogen acc. to DIN 3535, part 6 FA	mg/ (s·m)	< 0.01
Swelling acc. to ASTM F 146		
in IRM 903 Oil (replaces ASTM Oil No. 3) 5 h, 150 °C		
increase in thickness	%	< 10
increase in weight	%	< 20
in ASTM Fuel B 5 h, room temp.		
increase in thickness	%	< 15
increase in weight	%	< 20
in water / antifreeze (50:50) 5 h, 100 °C		
increase in thickness	%	< 5
increase in weight	%	< 15
Maximum continuous temperature	°C	250
Maximum operating pressure	bar	80



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".



AFM 31

DIN 28091-2:

Cold creep ϵ_{KSW}	%	11 - 20
Cold recovery ϵ_{KRW}	%	6 - 11
Hot creep during service $\epsilon_{WSW/T}$	%	60 - 70
Hot recovery $\epsilon_{WRW/T}$	%	≈ 0.8
Recovery R	mm	≈ 0.015
Specific leakage rate λ	mg/ (s·m)	< 0.025
Residual surface pressure after 1000 h (in air at 100 °C)	%	> 50

Sealing parameters, see corresponding [Table](#)



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

Max. thickness variation in a sheet:
0.1 mm for sheet thickness ≤1.00 mm, and 0.2 mm for thickness >1.00 mm