

# HiMod® FlatSeal™ 43 & 45

Superior performance  
in food applications



**Your Partner for Sealing Technology**

## A range of gaskets to meet market needs

The HiMod® flat gasket range consists of products that will satisfy the requirements of the majority of gasket applications within aerospace, chemical and processing industries. It offers compliance with virtually all relevant standards including FDA and those for blowout and fugitive emissions.

## HiMod® FlatSeal™ 43 and 45 – Superior performance in food applications

Suitable for food contact, the gaskets offer improved performance compared to conventional polytetrafluoroethylene (PTFE) flat gaskets.

### Applications

- Food, beverage and pharmaceuticals
- Petrochemicals
- Chemical processing
- Aerospace industries
- Paper manufacturing

## Features and benefits

- Suitable for food contact; compliant with FDA 177.1550
- Operating temperatures from -210 °C to +260 °C
- Compatible with a wide range of media including oils, greases, acids, alkalis, solvents, refrigerants, water and steam
- Leakage below limits specified in DIN 3535-6
- Blowout resistant & excellent creep resistance
- Unlimited shelf life
- HiMod® FlatSeal™ 43 is compatible with concentrated mineral acids, high mechanical properties, and withstands pressure to 83 bar
- HiMod® FlatSeal™ 45 is compatible with most lyes and acids throughout pH levels (pH 0-14). It has good mechanical properties, withstands vacuum to 100 bar - resistant to cold flow
- Approvals: HiMod® FlatSeal™ 43: DVGW, BAM\*, TA Luft, FDA  
HiMod® FlatSeal™ 45: TA Luft, FDA

## Good for people and the environment

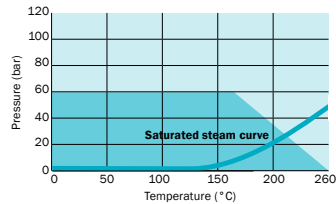
HiMod® FlatSeal™ 43 and 45 are manufactured in facilities that comply with ISO/TS 16949 and ISO 14001. This means complete transparency in all areas of production and a high degree of security for our customers.

# Technical information about HiMod® FlatSeal™ 43 & 45

## Recommendations for use

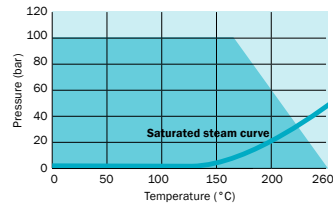
### HiMod® FlatSeal™ 43

#### Water/steam

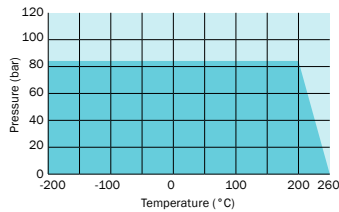


### HiMod® FlatSeal™ 45

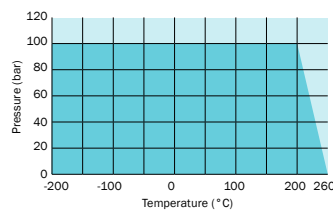
#### Water/steam



#### Other Media



#### Other Media



The temperature and pressure recommendations in the graphs apply to gaskets with a thickness of 2.0 mm and smooth flanges. Higher stresses are possible when thinner gaskets are used.

Example for the most commonly other media used. Exact data for specific, individual cases are available on demand.

## Material data

General data	HMF43	HMF45
<b>Elements</b>	Modified and structured polytetrafluoroethylene (PTFE), filled with silica	Multi-directional expanded polytetrafluoroethylene (PTFE)
<b>Approvals</b>	DVGW BAM*, TA Luft, FDA	FDA, TA Luft
<b>Color</b>	Beige	White
<b>Thickness in mm</b>	HMF43: 1.0/ 1.5/ 2.0/ 3.0 HMF45: 0.5/ 1.0/ 1.5/ 2.0/ 3.0/4.0/ 5.0 Further thicknesses are available on request.	

Physical parameters	Test standard	Unit	Value**	Value**
Sample thickness 2.0 mm				
<b>Identification</b>	DIN 28 091-3		TF - M - 0	TF - 0 - 0
<b>Density</b>	DIN 28 090-2	[g/cm <sup>3</sup> ]	2.10	0.90
<b>Tensile strength</b>	DIN 52 910	[N/mm <sup>2</sup> ]	17	26
<b>Residual stress</b> <small>αdE/16</small> 150 °C, 30 N/mm <sup>2</sup> , 16h	DIN 52 913	[N/mm <sup>2</sup> ]	16	18
<b>Compressibility</b>	ASTM F 36 J	[%]	5	50
<b>Recovery</b>	ASTM F 36 J	[%]	45	10
<b>Cold compressibility</b> $\epsilon_{KSW}$	DIN 28 090-2	[%]	3	40
<b>Cold recovery</b> $\epsilon_{KRW}$	DIN 28 090-2	[%]	1	3
<b>Hot creep</b> $\epsilon_{WSW/150}$	DIN 28 090-2	[%]	20	15
<b>Hot recovery</b> $\epsilon_{WRW/150}$	DIN 28 090-2	[%]	3	2
<b>Leakage</b>	DIN 3535-6	[mg/(m <sup>2</sup> s)]	≤ 0.015	≤ 0.015
<b>Specific leakage rate (TA Luft)</b> Helium, 1bar, 30 MPA	VDI 2440/ TA Luft	[mbar/(m <sup>2</sup> s)]	5.4 · 10 <sup>-7</sup>	1.2 · 10 <sup>-6</sup>

\* Approvals applied for. \*\* Mode (typical value).

For further information on the entire HiMod® FlatSeal™ range please contact your local Trelleborg Sealing Solutions marketing company.

[www.tss.trelleborg.com](http://www.tss.trelleborg.com)