# Multiflon®

## Reinforced PTFE

### APPLICATIONS:

Flanges, lids, covers and split casing flanges. Suitable for a wide spectrum of media, such as acids, caustic solutions, solvents, etc.

Multiflon® is a registered trademark of Specma Seals AB.

Recommended flange surface finish:
Ra 3.2 - 12.5 µm.

### MATERIAL DESCRIPTION:

Multiflon® is the product name for Specma Seals' assortment of PTFE sheets, with or without reinforcement. Common to all variants is that they are manufactured according to the so-called skiving method, meaning veneer turning of a sintered, die-moulded, cylindrical billet of PFTE. This process is followed by a thermal treatment in a press so that the finished sheets are completely flat. To reduce cold and hot deformation, which is the greatest disadvantage of non-filled PTFE, and to improve mechanical stability,some form of filler (reinforcement) must be added. Multiflon® Black has carbon and graphite reinforcement, while Multiflon® Blue has glass fibre reinforcement. Multiflon® White has no reinforcement at all and is primarily recommended as low-friction material and not for soft gaskets due to its cold-flow properties.

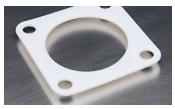
### PROPERTIES:

Multiflon® has excellent chemical resistance and withstands nearly all media, with the exception of molten alkali metals and certain fluorine compounds. Multiflon® Black and Multiflon® Blue have significantly reduced cold and hot deformation properties compared to conventional filled and pigmented PTFE materials. Moreover, both materials are extremely diffusion-proof, easy to handle, cut and punch, economic and can retightened. There is no risk of thermal bonding, and the materials are antistatic and do not age.

### MULTIFLON® IS SUPPLIED IN THE FOLLOWING VARIANTS:

**Multiflon® Black (black):**
Universal gasket material reinforced with 20% carbon and 5% graphite, for the majority of media in the process industry.

**Multiflon® Blue (light blue):**
Reinforced with 25% glass fibre. Standard gasket material in the pulp and paper industries.



**Multiflon® White (white):**
Non-reinforced PTFE. The gasket has cold-flow tendencies, which should be considered when used as a soft gasket. Multiflon® White has a low friction coefficient and is therefore suitable for use as a slide surface, etc.

### GROOVED GASKETS:

To achieve extremely high gas sealability values even in applications with low surface pressures, such as with enamel, glass, GRP and aluminium flanges, Multiflon® Black and Multiflon® Blue can be provided with sealing grooves according to a special manufacturing process. This process enables the gaskets to be equipped with a number of leakage barriers with intermediate high-density areas for optimal sealing performance even at very low seating stress. Manufactured in dimensions according to EN 1514-1 IBC from DN 15-DN 250.

### APPROVALS:

For special applications where extremely stringent demands are made, Multiflon® materials have been subject to extensive tests as per the following:

***BAM approval.***
Multiflon® Black is approved by the Federal Institute for Materials Research and Testing (BAM) for use in applications handling oxygen, max. temp. +90°C and max. pressure 25 bar.

***Food and Drug Administration (FDA), USA.***
Multiflon® Blue and Multiflon® White meets requirements as per FDA Regulation 21 CFR 177.1550 for usage in food and pharmaceutical applications.

## TECHNICAL DATA:

| Multiflon® | Black | Blue | White | | |
|---|---|---|---|---|---|
| Colour | Black | Light blue | White | | |
| Temperature range | -200°C to +180°C* | -200°C to +180°C* | -200°C to +180°C* | | |
| pH range | 0-14 | 0-14 | 0-14 | | |
| Max. internal pressure | 40 bar | 40 bar | 6 bar | | |
| Recommended min. seating stress (DIN 28090-1) | 15 N/mm2 | | | 15 N/mm2 | 10 N/mm2 |
| Recommended max. seating stress (DIN 2505-2) | 70 N/mm2 | | | 50 N/mm2 | 25 N/mm2 |
| Gas leakage (DIN 3535-6) | 0 ml/min | 0 ml/min | 0 ml/min | | |
| Compressibility (ASTM F36) | 20% | 25% | - | | |
| Recovery (ASTM F36) | 30% | 28% | - | | |
| Compression set (ASTM F38) | 46% | 52% | - | | |
| Density | 2.10 g/cm3 | 2.25 g/cm3 | | 2.15 g/cm3 | |
| Gasket group, as per TKN 87 | 2 2 | 2 | | | |
| m-factor (ASME T=1.5 mm) | 2.8 | 2.5 | - | | |
| y-factor (ASME T=1.5 mm) | 15 N/mm2 | 15 N/mm2 | | - | |

*) All PTFE products can be subjected to a temperature of +260°C.
PTFE sublimates at +327°C, but degradation begins at +260°C.
In a flange where a PTFE gasket is subject at the same time to seating stress, internal medium pressure and heat, we definitely recommend that a greater safety margin be used by limiting general use to max. +180°C.

## DIMENSIONS:

| Thickness mm | Sheet size mm | Kg per sheet | Part number |
|---|---|---|---|
| | Multiflon® Black | | |
| 0.5 | 1200 x 1200 | 1.5 | 358905 |
| 1.0 | 1200 x 1200 | 3.0 | 358910 |
| 1.5 | 1200 x 1200 | 4.5 | 358915 |
| 1.5 | 1200 x 2000 | 7.6 | 358917 |
| | Multiflon® Blue | | |
| 1.0 | 1200 x 1200 | 3.2 | 357910 |
| 1.0 | 1200 x metres | - | 357911 |
| 1.5 | 1200 x 1200 | 4.9 | 357915 |
| 1.5 | 1500 x 1500 | 7.6 | 357916 |
| 2.0 | 1200 x 1200 | 6.5 | 357920 |
| 3.0 | 1200 x 1200 | 9.6 | 357931 |
| | Multiflon® White | | |
| 1.5 | 1200 x 1200 | 4.6 | 356840 |
| 1.5 | 1200 x 1600 | 6.2 | 356850 |
| 1.5 | 1200 x 2400 | 9.2 | 356860 |

Ready-cut gaskets as per EN 1514-1 IBC are normally in stock.
We also manufacture finished gaskets according to customer´s specifications.