



# FACTS: GASKETS



**Culimeta<sup>®</sup>**

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## Proven products for thermal, electrical and acoustic insulation

What Henri Cuylits started in 1926 in Den Haag was continued by his son Alfons Cuylits in 1958 by founding a trading company in Monheim in glass-fibre thermo-electro-insulating tubes. In 1961 everything necessary was in place to integrate the manufacturing of its own products. Vincent and Diederik Cuylits are the third generation in the family-run business. Production sites in Germany, France and Latvia with more than 26.000 m<sup>2</sup> manufacturing space and 220 employees guarantee a wide range of products within a strong distribution network. Culimeta has two production sites in Germany. We master the technologies and manufacturing processes that are required for the production of high-quality glass-fibre products with more than 70 employees at the main factory in Bersenbrück and the Mölln branch.



# GLASS FIBRE PRODUCTS: GASKETS

Our standard products alone cover a spectrum of types and variations of gaskets, bar none. However, we specialized in the development and production of customer specified designs. Ready-made solutions are an often requested service we provide. When it comes to threads and textured yarns we can ensure the high Culimeta quality standards in all raw materials used, since our production is completely self-sufficient.

In this booklet we cover all important aspects about our gasket products. Some of the areas where our products are being used:

- Fire Places
- Industrial Ovens
- Boiler
- Smoke and Exhaust Pipes
- Access Hatches
- Painting Chambers and Drying Ovens
- Bricks and Tile Plants
- Mechanical Engineering and Factory Construction
- Domestic Appliance Industry
- Filter Industry



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There is an ever increasing demand on product quality and completeness of documentation. Its implementation is an integral part of our future-oriented company policy.

Several audits were proof to the fact that a quality-management system, in compliance with industrial standards, not only can be introduced successfully but maintained and expanded as well.

By issuing its certificate ISO 9001:2000, the Seaman's Accident Prevention and Insurance Association (the inspection and certification authority) attested already in 2005 to our compliance with industrial standards.

### Quality Management

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## E-Glass

### Raw Material Used

E-Glass yarns and threads, textured E-Glass yarns,  
Diameter specified 9 - 13  $\mu\text{m}$

### Application temperature

450°C, Short term up to 550°C

### Properties:

- no health risks as free of asbestos and ceramic fibers
- fire-proof
- non-ageing
- good electrical insulation
- good thermal insulation
- oil and solvent resistant - chemical resistance (pH 3-9)
- not hygroscopic
- environmentally friendly



# E-GLASS: TECHNICAL DATA

## Chemical Composition

SiO <sub>2</sub>	53 - 57 %
Al <sub>2</sub> O <sub>3</sub>	12 - 15 %
CaO + MgO	22 - 26 %
B <sub>2</sub> O <sub>3</sub>	5 - 8 %
F <sub>2</sub>	0 - 0,6 %
Na <sub>2</sub> O + K <sub>2</sub> O	< 1 %
Fe <sub>2</sub> O <sub>3</sub>	= 0,5 %
Others	none

## Physical Properties

Density	2.60 g/cm <sup>3</sup>
Hardness	5.60 (Vickers grading 50 g-15 s)
Sound Propagation	5680 m/s

## Mechanical Properties

Tensile strength of base fiber	3.400 MPa = 493 ksi
Tensile strength certification of yarn	2.400 MPa
Tensile modulus	10,5 msi
Tensile strength of sized yarn	min. 50 cN/tex
Break strength of sized yarn	
according to size used	2,2 - 2,5 %
Elasticity	100 %

## Electrical Properties

Dielectric Constant	6.40 at 1 MHz
Dielectric Constant	6.13 at 1 GHz
Loss Angle	0.0018 - 0.0039 at 1 MHz
Loss Angle	0.0039 at 1 GHz
Resistivity	1014 - 1015 W × cm
Surface resistance	1013 - 1014 W × cm
Electric strength	8 - 12 kV/mm

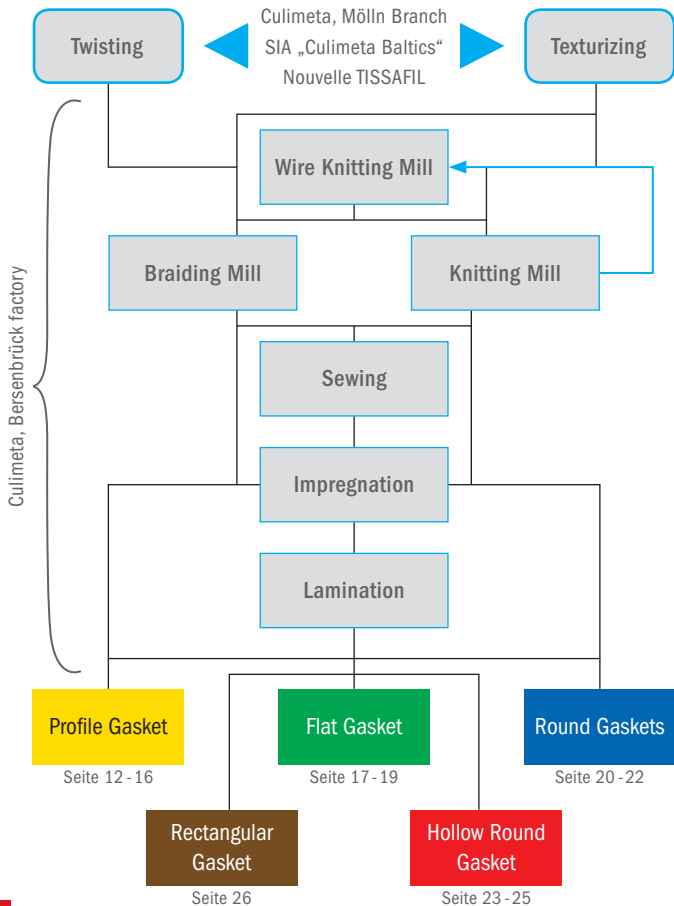
## Thermal Properties

Melting point	840° C
Softening temperature	617° C
Linear thermal expansion coefficient	5,3 × 10 <sup>-6</sup>
Specific heat	@ 20° C 0,764 J/g °K
	@ 200° C 0,958 J/g °K
Thermal conductivity coefficient	1,0 W/m × K

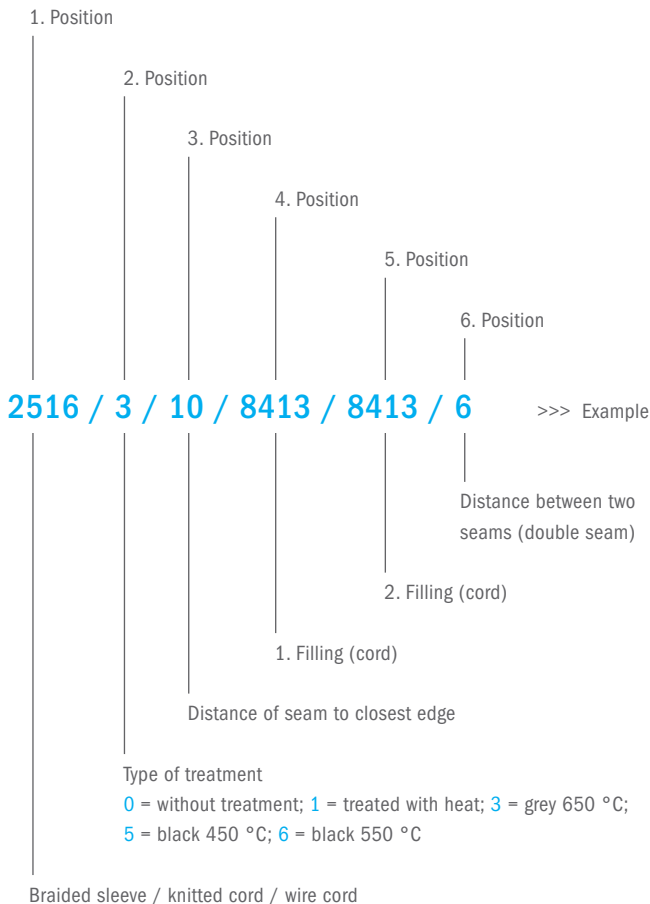
## Thermal resistance of basic yarn

Temperature in ° C	Remaining tensile strength in %
-200	100
200	98
300	82
400	65
500	46
600	14

# PRODUCTION



# NOMENCLATURE



# PROFILE GASKETS

## Glass-Fibre Profile Gasket

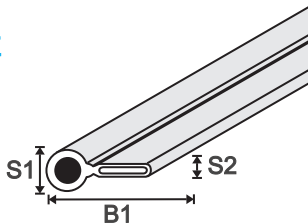
with one E-Glass cord  
and single or double seam



S1 = Exterior diameter at bulge

S2 = Thickness of flag

B1 = Overall width



### Designation of Product shown:

9610/3/11/84203/0/0

S1 = 10 mm

S2 = 2 mm

B1 = 25 mm

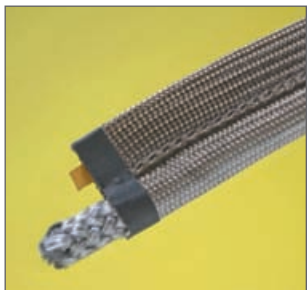
Flag with 6 mm double-faced adhesive tape

### Available Sizes (minimum - maximum)

S1 = 4 - 20 mm

S2 = 1 - 3 mm

B1 = 15 - 70 mm



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

## Glass-Fibre Profile Gasket

with two E-Glass cords  
and single or double seam



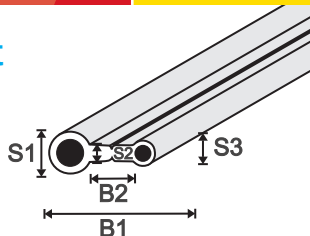
S1 = Exterior diameter at bulge 1

S2 = Thickness

S3 = Exterior diameter at bulge 2

B1 = Overall width

B2 = Distance between cords



### Designation of Product shown:

1089/5/8/84205/2007/0/0

S1 = 13 mm, S2 = 1 mm, S3 = 4 mm,

B1 = 25 mm, B2 = 6 mm

### Available Sizes (minimum - maximum)

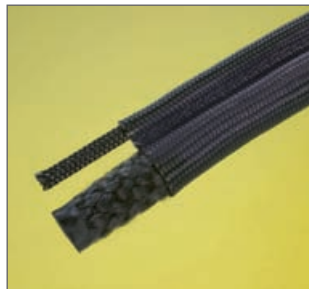
S1 = 4 - 20 mm

S2 = 1 - 3 mm

S3 = 4 - 20 mm

B1 = 15 - 65 mm

B2 = 6 mm (minimum depends on thickness of cord)



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

# PROFILE GASKETS

## Glass-Fibre Profile Gasket

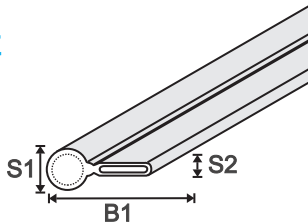
with one V4A-wire cord  
and single or double seam



S1 = Exterior diameter at bulge

S2 = Thickness of flag

B1 = Overall width



### Designation of Product shown:

1083/1/13/8487/0/6

S1 = 14 mm

S2 = 1.4 mm

B1 = 38 mm

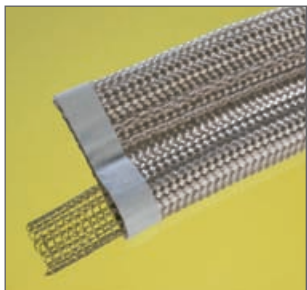
with double seam

### Available Sizes (minimum - maximum)

S1 = 6 - 16 mm

S2 = 1 - 3 mm

B1 = 15 - 70 mm

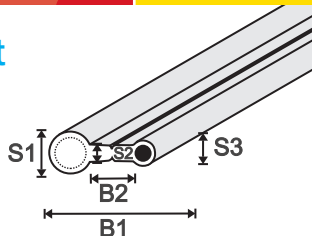


### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

## Glass-Fibre Profile Gasket

with one V4A-wire cord  
and one E-Glass cord  
and single or double seam



- S1 = Exterior diameter at bulge 1  
S2 = Thickness  
S3 = Exterior diameter at bulge 2  
B1 = Overall width  
B2 = Distance between cords



### Designation of Product shown:

1089/5/8/8487/2007/0

S1 = 13 mm, S2 = 1 mm, S3 = 4 mm

B1 = 23 mm, B2 = 6 mm

### Available Sizes (minimum - maximum)

S1 = 6 - 16 mm (wire cord)

S2 = 1 - 3 mm

S3 = 4 - 20 mm (E-Glass cord)

B1 = 15 - 65 mm

B2 = 6 mm (minimum depends on thickness of cord)



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

# PROFILE GASKETS

## Glass-Fibre Profile Gasket

with two V4A-wire cords  
and single or double seam



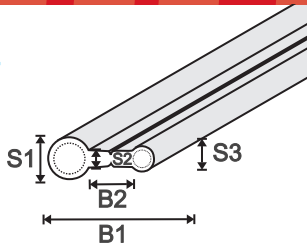
S1 = Exterior diameter at bulge 1

S2 = Thickness

S3 = Exterior diameter at bulge 2

B1 = Overall width

B2 = Distance between cords



### Designation of Product shown:

1083/0/13/84150/8472/10

S1 = 10 mm, S2 = 1.4 mm, S3 = 7 mm

B1 = 40 mm, B2 = 23 mm

### Available Sizes (minimum - maximum)

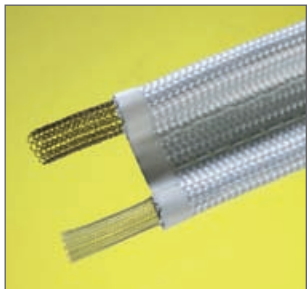
S1 = 6 - 16 mm

S2 = 1 - 3 mm

S3 = 6 - 16 mm

B1 = 15 - 65 mm

B2 = 6 mm (minimum depends on thickness of cord)



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

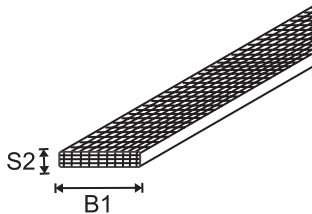
## Glass-Fibre Flat Gasket

woven,  
optional also as ladder tape



S2 = Thickness

B1 = Width



### Designation of Product shown:

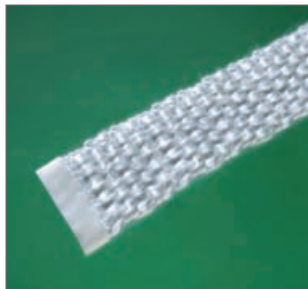
S2 = 3 mm

B1 = 25 mm

### Available Sizes (minimum - maximum)

S2 = 1.5 - 5 mm

B1 = 10 - 150 mm



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

# FLAT GASKETS

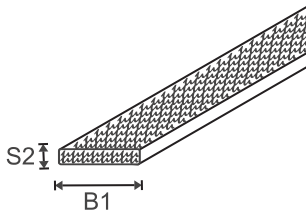
## Glass-Fibre Flat Gasket

knitted,  
optional also as ladder tape



S2 = Thickness

B1 = Width



### Designation of Product shown:

84407/3/0/0/0/0

S2 = 3 mm

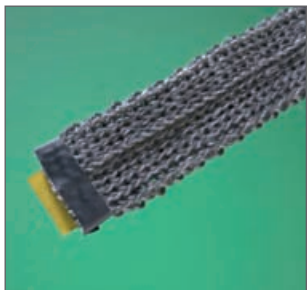
B1 = 25 mm

Ladder tape with double-faced  
adhesive tape

### Available Sizes (minimum - maximum)

S2 = 1 - 4 mm

B1 = 6 - 50 mm



### Available Types

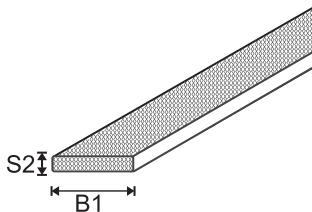
- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

## Glass-Fibre Flat Gasket

braided,  
optional with single or double seam



S2 = Thickness  
B1 = Width



### Designation of Product shown:

7207/5/6/0/0/6

S2 = 2 mm

B1 = 20 mm

with double seam and double-faced  
adhesive tape

### Available Sizes (minimum - maximum)

S2 = 1 - 6 mm

B1 = 8 - 40 mm



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

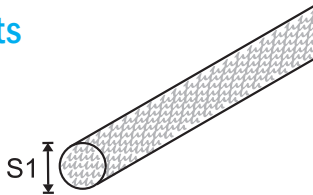
# ROUND GASKETS

## Glass-Fibre Round Gaskets

knitted (full cord)



S1 = Exterior diameter



### Designation of Product shown:

84204/0/0/0/0/0

S1 = 12 mm

### Available Sizes (minimum - maximum)

S1 = 3 - 22 mm



### Available Types

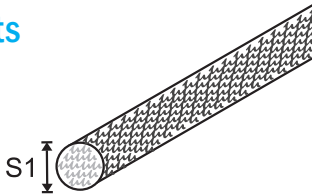
- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

## Glass-Fibre Round Gaskets

knitted and  
covered with V4A-wire



S1 = Exterior diameter



### Designation of Product shown:

84203/3W/0/0/0/84155

S1 = 10 mm

### Available Sizes (minimum - maximum)

S1 = 6 - 16 mm



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey

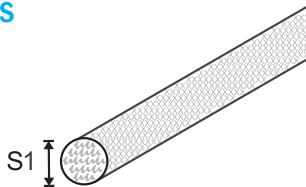
# ROUND GASKETS

## Glass-Fibre Round Gaskets

knitted and  
covered with braided E-Glass



S1 = Exterior diameter



### Designation of Product shown:

80140/6/0/84130/0/0

S1 = 13 mm

### Available Sizes (minimum - maximum)

S1 = 5 - 50 mm (Off-white)

S1 = 5 - 22 mm\*

(with impregnation and double-faced  
adhesive tape to aid installation)



### Available Types\*

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

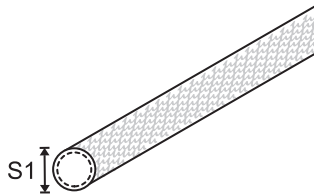
# HOLLOW ROUND GASKETS

## V4A-Wire Cord

covered with knitted E-Glass



S1 = Exterior diameter



### Designation of Product shown:

84203/3/0/8472/0/0

S1 = 10 mm

### Available Sizes (minimum - maximum)

S1 = 6 - 16 mm



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

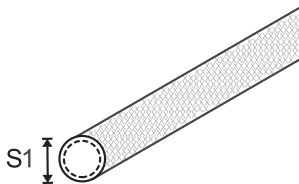
# HOLLOW ROUND GASKETS

## V4A-Wire Cord

covered with braided E-Glass



S1 = Exterior diameter



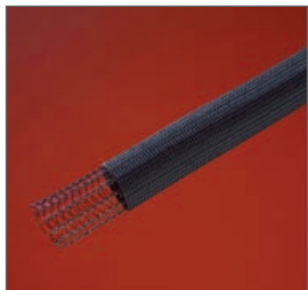
### Designation of Product shown:

12013/5/0/84134/0/0

S1 = 12 mm

### Available Sizes (minimum - maximum)

S1 = 6 - 16 mm



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

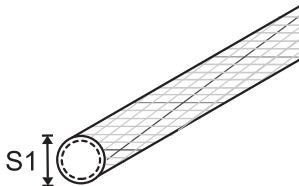
# HOLLOW ROUND GASKETS

## Braided Sleeve

made of E-Glass and V4A-wire



S1 = Exterior diameter



### Designation of Product shown:

7205/3/0/0/0/0

S1 = 6 mm

with double-faced adhesive tape

### Available Sizes (minimum - maximum)

S1 = 6 - 15 mm

larger diameters on request!



### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

# RECTANGULAR GASKETS

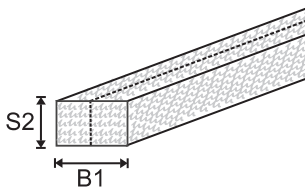
## Glass-Fibre Rectangular Gasket

with single or double seam



S2 = Thickness

B1 = Width



### Designation of Product shown:

84110/3/6/0/0/6

S2 = 8 mm

B1 = 18 mm

with double seam

### Available Sizes (minimum - maximum)

S2 = 4 - 11 mm

B1 = 8 - 23 mm



Relation of thickness to width is about 1:2.

### Available Types

- Heat resistance up to 450° C
- Off-white, treated with heat or black with high abrasive resistance
- Heat resistance up to 550° C - black
- Heat resistance up to 650° C - grey
- Double-faced adhesive tape to aid installation for 450°C and 650°C types

## High temperature glue Thermic 1100°

Product Group: HKP\*\*\*

THERMIC 1100° C is composed of various inorganic substances. The product is suitable to apply insulating material to steel, glass, enamel or similar items. The object's surface should be free from dust, oil or similar substances and the glue should be applied as thin and even as possible. The glue is tack-dry after about 2 - 3 hours and fully sets after 24 hours at room temperature of 17° to 20° C. Do not store material below 0° C.

The product does not corrode steel due to its high PH-value. When in contact with aluminum a bit of corrosion is possible however.

### Chemical Composition

SiO <sub>2</sub>	-	34,55 %
Al <sub>2</sub> O <sub>3</sub>	-	8,41 %
Fe <sub>2</sub> O <sub>3</sub>	-	0,26 %
MgO	-	0,02 %
CaO	-	0,02 %
K <sub>2</sub> O	-	0,27 %
Na <sub>2</sub> O	-	6,65 %

### Available Quantities:

17 ml tube

500 g cartridge

15 kg/30 kg bucket

Available Colours: anthracite or beige



# ASSEMBLY TOOLS

## Glass Fibre Adhesive Tape

Product Group: HBB\*\*\*

Substance / Glue: thermosetting rubber glue

### Physical Properties

Full thickness: . . . . .	0.18 mm
Substance thickness: . . . . .	0.10 mm
Tensile strength: . . . . .	20 daN/cm
Elongation at rupture: . . . . .	8 % (white) / 5 % (black)
Initial adhesive strength on steel: . . . . .	4.4 N/cm
Temperature resistance: . . . . .	130°C
Insulation Class: . . . . .	B
Cycle: . . . . .	1 h at 150 °C
. . . . .	2 h at 130 °C

### Electrical Properties

Dielectric strength: . . . . .	2.5 kV
--------------------------------	--------

### Specifications

Colour: . . . . .	white or black
Widths (white): . . . . .	25, 30 and 50 mm
Widths (black): . . . . .	25, 30 and 40 mm
Length of roll: . . . . .	50 m
Diameter at core: . . . . .	76 mm

### Shell life

When stored properly:  
six months from date of delivery



## Connection Tubes

Product Group: FS7\*\*\*

We offer connection tubes made of glass-fibre, black impregnated, in all required diameters and lengths since visible points of impact are always weak points when it comes to leak tightness. By simply inserting the ends into the tubes, the gasket's connection is closed.



# REPAIR SETS

## Blister Packaging

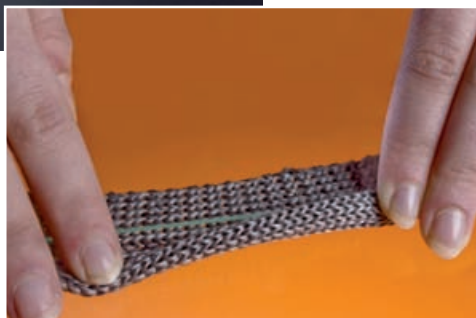
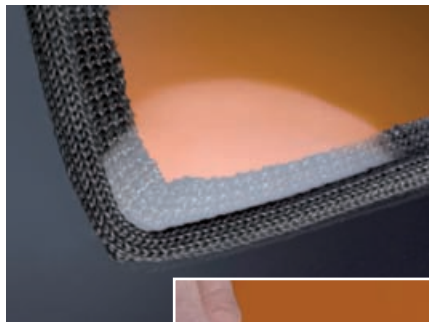
We offer all gaskets, cut to length, optionally with 17 ml tubes of our high-temperature glue Thermic and/or connection tubes in blister packages to ensure the after-sales-market is well serviced. Depending on the quantities purchased, back-sides of cartons can be individually designed (e.g. your company logo).

Call us. We are glad to be of service!



## Glass-Fibre Profile Gaskets, knitted

The glass-fibre profile gasket, makes it possible to insert a sheet of glass between bulge and flange without causing problems. Contrary to other products, no installation tool (like glue or double-faced adhesive tape) is needed. This gasket is applied in places where glass has to be insulated from both sides and wide gaps have to be covered.



Dimensions on request!

## The EFA quality seal

Nearly 40 European enterprises of the area solid fuel fireplaces pursuit today the same aim of “a strong community in Europe”.

Communication and cooperation between the members within five different working groups as well as the collaboration with norm setting bodies is to be led to uniform European regulations.

Furthermore, there will be developed new, intensive and more environmentally heating technologies in order to support the use of solid fuels.

The EFA strongly represents the interest of their members concerning ecological, economical and social aspects. New, future-oriented ideas will be realised and synergies will be created.



This labelling shows a high product quality which is accompanied by a small pollution.

### Fireplaces- and tiled stoves with EFA quality label:

After extensive tests, only high-class products receive the EFA quality label. There are arranged regular tests, negotiations and conversations with test centres and different manufacturers.







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