

Product survey

ThermoFlow® - cut fibers for thermoplastics

(produced of silanized E-glass fibers)

for polyamide PA 6 and 6.6 - also ABS/PC-Blend

| Type | Filament µm | Length mm | Extraction, Dosage | Mechanical characteristics | Recommendation |
|--------|----------------|--------------|--------------------|-------------------------------|-------------------------------|
| CS 672 | 10 / 13 | 4 | *** | *** | PA6 + 6.6 |
| CS 674 | 10 / 13 | 4 | *** | *** | PA6 + 6.6 + PPA ^{/1} |
| CS 675 | 10 | 4 | *** | *** | PA6 + 6.6 + PPA |
| CS 701 | 10 / 13 | 4 | *** | ** | PA |

^{/1} food permission EU

for polypropylene PP – PVC - PE

| Type | Filament µm | Length mm | Extraction, Dosage | Mechanical characteristics | Recommendation |
|--------|----------------|--------------|--------------------|-------------------------------|-----------------------------|
| CS 636 | 10 / 13 | 4 | *** | *** | PP – PVC – PE ^{/1} |

^{/1} food permission EU + USA

PBT/PET

| Type | Filament µm | Length mm | Extraction, Dosage | Mechanical characteristics | Recommendation |
|--------|----------------|--------------|--------------------|-------------------------------|-----------------------|
| CS 601 | 10 / 13 | 4 | *** | *** | PBT/PET ^{/1} |

^{/1} food permission EU

for styrene/maleic acid anhydride (SMA), PC/ABS and PC

| Type | Filament µm | Length mm | Extraction, Dosage | Mechanical characteristics | Recommendation |
|--------|----------------|--------------|--------------------|-------------------------------|----------------|
| CS 720 | 13 | 4,7 | *** | *** | SMA,PC/ABS,PC |

for high temperature polymers PEEK, PES, PPS, PEI and others.

| Type | Filament µm | Length mm | Extraction, Dosage | Mechanische characteristics | Recommendation |
|--------|----------------|--------------|--------------------|--------------------------------|----------------|
| CS 768 | 10 | 4 | *** | *** | PPS, Hi Temp |

Conditioning and packaging

in Big Bag: net 1000 kg, pallet 1140 x 1140 mm
in Octabin: net 1000 kg, pallet 1140 x 1140 x 1200 mm

For detailed technical information of the finally valid production norm please ask for the technical data sheet.

Product information

ThermoFlow® 672

Cut fibers for polyamide PA 6 and 6.6



Description:

ThermoFlow® 672 – cut fibers are produced of silanized E-glass fibers.

The recommended field of application is the production of PA6 resp. PA6.6 (nylon)-thermoplastic systems. Due to high fiber integrity a very good handling, extraction and dosage is guaranteed. The type ThermoFlow® 672 stands out for very high mechanical strength of the finished part.

The product is produced of E-glass, marked as aluminium borosilicate glass according to DIN 1259-1 and ASTM D 578.

Quality characteristics:

- ✓ Best flowability and dosage
- ✓ Nearly dustfree working
- ✓ Optimum dispersion of the fibers in its filaments
- ✓ Maximum mechanical strength of the finished part



Technical characteristics (target values):

| | Method | Unit | CS EC 10 672 4mm | CS EC 13 672 4mm |
|---------------------------|-----------------|------|------------------|------------------|
| Filament diameter | SOP 840_4-11-13 | mm | 9.40 – 10.60 | 12.40 – 13.60 |
| Cut length | SOP 840_4-11-18 | mm | 3.0 – 5.0 | 3.0 – 5.0 |
| Moisture contentt | ISO 3344 | % | 0.08 | 0.08 |
| Glowing loss (LOI) | ISO 1887 | % | 0.55 – 0.85 | 0.55 – 0.85 |

Max. 2% of the cut fibers can be outside the length range

Packaging and labeling:

in Big Bag: net 1000 kg, pallet 1140 x 1140 mm

Each packing unit is marked with following information:

Producer, product name, batch, gross- / net weight, product code, production date, packaging code

Transport and storage conditions:

The product has to be transported in closed and moisture protected vehicles. A quality certificate is attached to each delivery.

The products should be stored in the original packaging in dry, roofed, and dust-free warehouses. The recommended temperature should be between 10°C and 30°C at a relative air moisture between 50% and 75%.

Before working the products should be conditioned in the working area in original packaging for at least 24 hours. The pallets may not be stacked unless otherwise written on the packing unit.

Product information

ThermoFlow® 674

Cut fibers for polyamide PA 6 and 6.6 – food contact



Description:

ThermoFlow® 674 – cut fibers are produced of silanized E-glass fibers.

The recommended field of application is the production of PA6 resp. PA6.6 (nylon)- thermoplastic systems as well as PPA (polyphthalamide). Due to high fiber integrity a very good handling, extraction and dosage is guaranteed. The type ThermoFlow® 674 stands out for very high mechanical strength of the finished part.

The product is produced of E-glass, marked as aluminium borosilicate glass according to DIN 1259-1 and ASTM D 578.

Quality characteristics:

- ✓ Best flowability and dosage
- ✓ Good hydrolysis resistance
- ✓ Optimum dispersion of the fibers in its filaments
- ✓ Very good mechanical characteristics
- ✓ Suitable for products with food contact



Technical characteristics (target values):

| | Method | Unit | CS EC 10 674 4mm | CS EC 13 674 4mm |
|--------------------|-----------------|------|------------------|------------------|
| Filament diameter | SOP 840_4-11-13 | mm | 9.40 – 10.60 | 12.40 – 13.60 |
| Cut length | SOP 840_4-11-18 | mm | 3.0 – 5.0 | 4.0 – 5.0 |
| Moisture content | ISO 3344 | % | 0.08 | 0.08 |
| Glowing loss (LOI) | ISO 1887 | % | 0.75 – 1.10 | 0.70 – 1.10 |

Max. 2% of the cut fibers can be outside the length range;

Packaging and labeling:

in Big Bag: net 1000 kg, pallet 1140 x 1140 mm

Each packing unit is marked with following information:

Producer, product name, batch, gross- / net weight, product code, production date, packaging code

Transport and storage conditions:

The product has to be transported in closed and moisture protected vehicles. A quality certificate is attached to each delivery.

The products should be stored in the original packaging in dry, roofed, and dust-free warehouses.

The recommended temperature should be between 10°C and 30°C at a relative air moisture between 50% and 75%.

Before working the products should be conditioned in the working area in original packaging for at least 24 hours. The pallets may not be stacked, unless otherwise written on the packing unit.

Product information

ThermoFlow® 675

Cut fibers for polyamide PA 6 and 6.6 – food contact



Description

ThermoFlow® 675 – cut fibers are produced of silanized E-glass fibers.

The recommended field of application is mainly the production of PA6.6 (nylon)-thermoplastic-systems but also PA6 and PPA (polyphthalamide).

The product is hydrolysis resistant.

The product is produced of E-glass, marked as aluminium borosilicate glass according to DIN 1259-1 and ASTM D 578.

Quality characteristics:

- ✓ Best flowability and dosage
- ✓ Good hydrolysis resistance
- ✓ Optimum dispersion of the fibers in its filaments
- ✓ Very good mechanical characteristics
- ✓ Suitable for products with food contact



Technical characteristics (target values):

| | Method | Unit | CS EC 10 675 4mm |
|---------------------------|-----------------|------|------------------|
| Filament diameter | SOP 840_4-11-13 | mm | 9.40 – 10.60 |
| Cut length | SOP 840_4-11-18 | mm | 3.0 – 5.0 |
| Moisture content | ISO 3344 | % | 0.08 |
| Glowing loss (LOI) | ISO 1887 | % | 0.60 – 1.20 |

Max. 2% of the cut fibers can be outside the length range;

Packaging and labeling:

in Big Bag: net 1000 kg, pallet 1140 x 1140 mm

Each packing unit is marked with following information:

Producer, product name, batch, gross- / net weight, product code, production date, packaging code

Transport and storage conditions:

The product has to be transported in closed and moisture protected vehicles. A quality certificate is attached to each delivery.

The products should be stored in the original packaging in dry, roofed, and dust-free warehouses.

The recommended temperature should be between 10°C and 30°C at a relative air moisture between 50% and 75%.

Before working the products should be conditioned in the working area in original packaging for at least 24 hours. The pallets may not be stacked unless otherwise written on the packing unit.

Product information

ThermoFlow® 701

Cut fibers



Description:

ThermoFlow® 701 – cut fibers are produced of silanized E-glass fibers.

The recommended field of application is the production of PA. Due to high fiber integrity a very good handling, extraction and dosage is guaranteed.

The type 701 stands out for high mechanical strength of the final product

The product is produced of E-glass, marked as aluminium borosilicate glass according to DIN 1259-1 und ASTM D 578.

Quality characteristics:

- ✓ Best flowability and dosage
- ✓ Optimum dispersion of the fibers in its filaments
- ✓ Good mechanical strength of the finished part



Technical characteristics (target values):

| | Method | Unit | CS EC 10 701 4mm | CS EC 13 701 4mm |
|---------------------------|-----------------|------|------------------|------------------|
| Filament diameter | SOP 840_4-11-13 | mm | 9.40 – 10.60 | 12.70 – 13.97 |
| Cut length | SOP 840_4-11-18 | mm | 3.0 – 5.0 | 3.0 – 5.0 |
| Moiture content | ISO 3344 | % | 0.08 | 0.08 |
| Bulk density | SOP 840_4-11-12 | g/l | 520 - 820 | 580 - 920 |
| Glowing loss (LOI) | ISO 1887 | % | 0.60 – 1.20 | 0.60 – 1.20 |

Max. 2% of the cut fibers can be outside the length range;

Packaging and labeling:

in Big Bag: net 1000 kg, pallet 1140 x 1140 mm

Each packing unit is marked with following information:

Producer, product name, batch, gross- / net weight, product code, production date, packaging code

Transport and storage conditions:

The product has to be transported in closed and moisture protected vehicles. A quality certificate is attached to each delivery.

The products should be stored in the original packaging in dry, roofed, and dust-free warehouses.

The recommended temperature should be between 10°C and 30°C at a relative air moisture between 50% and 75%.

Before working the products should be conditioned in the working area in original packaging for at least 24 hours. The pallets may not be stacked unless otherwise written on the packing unit.

Product information

ThermoFlow® 636

Cut fibers



Description:

ThermoFlow® 636 – cut fibers are produced of silanized E-glass fibers.

The recommended field of application is the production of PP (polypropylene) thermoplastic systems. Due to high fiber integrity a very good handling, extraction and dosage is guaranteed. The type 636 stands out for high mechanical strength, especially at application in white goods e.g. dish washers and washing machines, which are exposed to a continuous load by hot water and cleaning agents. Resin compatibility PP – PVC – PE

The product is produced of E-glass, marked as aluminium borosilikate glass according to DIN 1259-1 and ASTM D 578.

Quality characteristics:

- ✓ Very good flowability and dosage
- ✓ Optimum dispersion of the fibers in its filaments
- ✓ High mechanical strength especially whilst application in "white goods"
- ✓ Best color stability in white matrix
- ✓ Type 636 can be used as reinforcement for plastics in contact with food (also in repeated application) in EU and USA.



Technical characteristics (target values):

| | Method | Unit | CS EC 10 636 4mm | CS EC 13 636 4mm |
|--------------------|-----------------|------|------------------|------------------|
| Filament Diameter | SOP 840_4-11-13 | mm | 9.40 – 10.60 | 12.40 – 13.60 |
| Cut length | SOP 840_4-11-18 | mm | 3.0 – 5.0 | 3.0 – 5.0 |
| Moiture content | ISO 3344 | % | 0.08 | 0.08 |
| Bulk density | SOP 840_4-11-12 | g/l | 600 - 1000 | 600 - 900 |
| Glowing loss (LOI) | ISO 1887 | % | 0.55 – 0.75 | 0.55 – 0.75 |

Max. 2% of the cut fibers can be outside the length range;

Packaging and labeling:

in Big Bag: net 1000 kg, pallet 1140 x 1140 mm

Each packing unit is marked with following information:

Producer, product name, batch, gross- / net weight, product code, production date, packaging code

Transport and storage conditions:

The product has to be transported in closed and moisture protected vehicles. A quality certificate is attached to each delivery.

The products should be stored in the original packaging in dry, roofed, and dust-free warehouses. The recommended temperature should be between 10°C and 30°C at a relative air moisture between 50% and 75%.

Before working the products should be conditioned in the working area in original packaging for at least 24 hours. The pallets may not be stacked unless otherwise written on the packing unit.

Product information

ThermoFlow® 601

Cut fibers



Description:

ThermoFlow® 601 – cut fibers are produced of silanized E-glass fibers.

The recommended field of application is the reinforcement of PBT/PET. Due to high fiber integrity a very good handling, extraction and dosage is guaranteed.

The type 601 stands out for high mechanical strength of the final product.

The product is produced of E-glass, marked as aluminium borosilicate glass according to DIN 1259-1 and ASTM D 578.

Qualität characteristics:

- ✓ Best flowability and dosage
- ✓ Optimum dispersion of the fibers in its filaments
- ✓ Good mechanical strength of the finished part
- ✓ Suitable for food contact



Technical characteristics (target values):

| | Method | Unit | CS EC 10 601 4mm | CS EC 13 601 4mm |
|---------------------------|-----------------|------|------------------|------------------|
| Filament diameter | SOP 840_4-11-13 | mm | 9.40 – 10.60 | 12.40 – 13.60 |
| Cut length | SOP 840_4-11-18 | mm | 3.0 – 5.0 | 3.0 – 5.0 |
| Moisture content | ISO 3344 | % | 0.08 | 0.05 |
| Bulk density | SOP 840_4-11-12 | g/l | 500 - 1000 | 500 - 1000 |
| Glowing loss (LOI) | ISO 1887 | % | 0.70 – 1.00 | 0.60 – 1.00 |

Max. 2% of the cut fibers can be outside the length range;

Packaging and labeling:

in Big Bag: net 1000 kg, pallet 1140 x 1140 mm

Each packing unit is marked with following information:

Producer, product name, batch, gross- / net weight, product code, production date, packaging code

Transport and storage conditions:

The product has to be transported in closed and moisture protected vehicles. A quality certificate is attached to each delivery.

The products should be stored in the original packaging in dry, roofed, and dust-free warehouses. The recommended temperature should be between 10°C and 30°C at a relative air moisture between 50% and 75%.

Before working the products should be conditioned in the working area in original packaging for at least 24 hours. The pallets may not be stacked unless otherwise written on the packing unit.

Product information

ThermoFlow® 720 for SMA

Cut fibers



Description:

ThermoFlow® 720 – cut fibers are produced of silanized E-glass fibers.

This e-glass fiber was developed for optimum reinforcement of styrene polymere like SMA (styrol/maleic acid anhydride). It brings excellent results in PC/ABS application.

Due to high fiber integrity a very good handling, extraction and dosage is guaranteed.

The product is produced of E-glass fibers, marked as aluminium borosilicate glass according to DIN 1259-1 and ASTM D 578.

Quality characteristics:

- ✓ Best flowability and dosage
- ✓ Optimum dispersion of the fibers in its filaments
- ✓ High mechanical strength of the finished part
- ✓ Very low fluff creation



Technical characteristics (target values):

| | Method | Unit | CS EC 13 720 4.7 mm |
|---------------------------|-----------------|------|------------------------|
| Filament diameter | SOP 840_4-11-13 | mm | 12.40 – 13.60 |
| Cut length | SOP 840_4-11-18 | mm | 3.7 – 5.7 |
| Moisture content | ISO 3344 | % | 0.05 |
| Bulk density | SOP 840_4-11-12 | g/l | 550 - 800 |
| Glowing loss (LOI) | ISO 1887 | % | 0.80 – 1.00 |

Max. 2% of the cut fibers can be outside the length range;

Packaging and labeling:

in Big Bag: net 1000 kg, pallet 1140 x 1140 mm

Each packing unit is marked with following information:

Producer, product name, batch, gross- / net weight, product code, production date, packaging code

Transport and storage conditions:

The product has to be transported in closed and moisture protected vehicles. A quality certificate is attached to each delivery.

The products should be stored in the original packaging in dry, roofed, and dust-free warehouses. The recommended temperature should be between 10°C and 30°C at a relative air moisture between 50% and 75%.

Before working the products should be conditioned in the working area in original packaging for at least 24 hours. The pallets may not be stacked unless otherwise written on the packing unit.

Product information

ThermoFlow® 768 for PPS

Cut fibers



Description:

ThermoFlow® 768 – cut fibers are produced of silanized E-glass fibers.

The recommended field of application is the reinforcement of high temperature polymers like PEEK, PES, PPS, PEI a.s.o..

Due to high fiber integrity a very good handling, extraction and dosage is guaranteed. The type 768 stands out for high mechanical strength of the final product.

The product is produced of E-glass, marked as aluminium borosilicate glass according to DIN 1259-1 and ASTM D 578.

Quality characteristics:

- ✓ Best flowability and dosage
- ✓ Optimum dispersion of the fibers in its filaments
- ✓ Good mechanical strength of the final part



Technical characteristics (target values):

| | Method | Unit | CS EC 10 768 4mm |
|---------------------------|-----------------|------|------------------|
| Filament diameter | SOP 840_4-11-13 | mm | 9.40 – 10.60 |
| Cut length | SOP 840_4-11-18 | mm | 3.0 – 5.0 |
| Moisture content | ISO 3344 | % | 0.05 |
| Bulk density | SOP 840_4-11-12 | g/l | 615 - 960 |
| Glowing loss (LOI) | ISO 1887 | % | 0.40 – 0.60 |

Max. 2% of his cut fibers can be outside the length range;

Packaging and labeling:

in Big Bag: net 1000 kg, pallet 1140 x 1140 mm

Each packing unit is marked with following information:

Producer, product name, batch, gross- / net weight, product code, production date, packaging code

Transport and storage conditions:

The product has to be transported in closed and moisture protected vehicles. A quality certificate is attached to each delivery.

The products should be stored in the original packaging in dry, roofed, and dust-free warehouses. The recommended temperature should be between 10°C and 30°C at a relative air moisture between 50% and 75%.

Before working the products should be conditioned in the working area in original packaging for at least 24 hours. The pallets may not be stacked unless otherwise written on the packing unit.