

## » Comfil® TFC (Thermo Formable Composite)

### Carbon Sheet

#### Supplier:

Centri AB (Fillauer)

#### Features & Benefits:

- Combines the high strength of carbon composite with the molding properties of a thermoplastic
- Available in two forms: U-D Form (with 90% strength unidirectionally) and 3-D Form (same strength bidirectionally)
- Can be heated in oven or heat gun
- Easily cut with scissors
- Easily formed to accommodate ankle or knee joints

#### Specifications:

- Identification: *Comfil-C® carbon reinforced hybrid yarn (continuous filament)*
- Components: *Carbon fiber filament yarn (weight 30–80%) and thermoplastic filaments (weight 20–70%)*
- Heating temperature: *Most applications = 220° C (428° F)*  
*Preformed foot orthotics = 204° C (400° F)*
- Carbon filament yarn composed of carbon fiber on basis polyacrylonitrile >95% and alkylimidazolinium ethosulphat <5%
- Available in sheets or prefabricated pieces
- When cutting the material, cut in the correct fiber orientation

#### Indications:

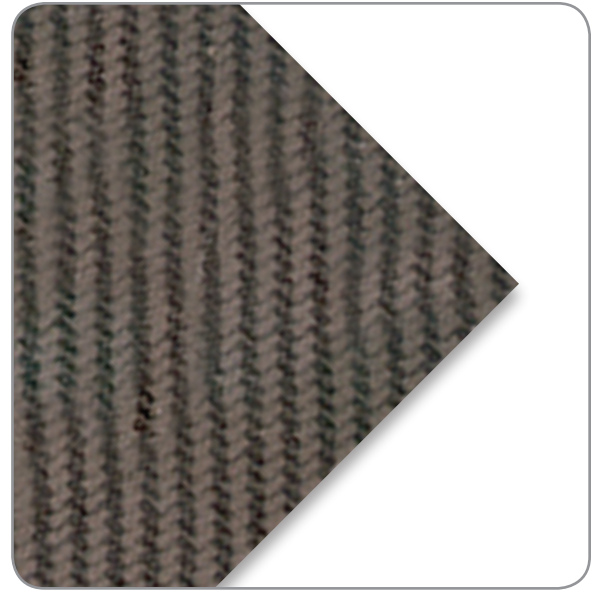
- Foot orthotics
- Knee orthotic applications
- AFO/KAFO applications

#### Call Points:

- Orthotist
- Orthotic technician
- Pedorthist
- Podiatrist

#### Warranty:

- Against manufacturer defects



See Materials Catalog 2007/08, #08 (page 18)

**Comfil® TFC (Thermo Formable Composite) » Centri AB (Fillauer)**

| Item No.   | Description                             | Material <sup>1</sup>          | Thickness     | Size   |             |               |
|--|---|--------------------------------|---------------|--|-------------|---------------|
| <b>U-D Form (Unidirectional)</b>   |   |                                |               |  |             |               |
| DF-700010101   | Thermoformable composite sheet          | 100% Glass                     | 1.6mm (.063") | 1000 x 600 mm (39 <sup>3</sup> / <sub>8</sub> " x 23 <sup>5</sup> / <sub>8</sub> " |             |               |
| DF-700010103   | Thermoformable composite sheet          | 70% Glass / 30% Carbon         | 2.55mm (.1")  | 1000 x 600 mm (39 <sup>3</sup> / <sub>8</sub> " x 23 <sup>5</sup> / <sub>8</sub> " |             |               |
| DF-700010127   | Thermoformable composite sheet          | 100% Carbon                    | 0.7mm (.028") | 1000 x 600 mm (39 <sup>3</sup> / <sub>8</sub> " x 23 <sup>5</sup> / <sub>8</sub> " |             |               |
| <b>3-D Form (Bidirectional)</b>  |   |                                |               |  |             |               |
| DF-700010121   | Thermoformable composite sheet          | 100% Glass                     | 0.75mm (.03") | 1000 x 600 mm (39 <sup>3</sup> / <sub>8</sub> " x 23 <sup>5</sup> / <sub>8</sub> " |             |               |
| DF-700010122   | Thermoformable composite sheet          | 100% Glass                     | 1.5mm (.059") | 1000 x 600 mm (39 <sup>3</sup> / <sub>8</sub> " x 23 <sup>5</sup> / <sub>8</sub> " |             |               |
| DF-700010123   | Thermoformable composite sheet          | 50% Glass / 50% Carbon         | 1.5mm (.059") | 1000 x 600 mm (39 <sup>3</sup> / <sub>8</sub> " x 23 <sup>5</sup> / <sub>8</sub> " |             |               |
| DF-700010124   | Thermoformable composite sheet          | 100% Carbon                    | 0.7mm (.028") | 1000 x 600 mm (39 <sup>3</sup> / <sub>8</sub> " x 23 <sup>5</sup> / <sub>8</sub> " |             |               |
| DF-700010125   | Thermoformable composite sheet          | 50% Glass / 50% Carbon         | 2.1mm (.08")  | 1000 x 600 mm (39 <sup>3</sup> / <sub>8</sub> " x 23 <sup>5</sup> / <sub>8</sub> " |             |               |
| DF-700010126   | Thermoformable composite sheet          | 100% Carbon                    | 0.5mm (.02")  | 1000 x 600 mm (39 <sup>3</sup> / <sub>8</sub> " x 23 <sup>5</sup> / <sub>8</sub> " |             |               |
| <b>U-D Form (Unidirectional) Insoles — Pair</b>  |   |                                |               |  |             |               |
| DF-700030141   | Composite rigid insole                  | 70% Glass / 30% Carbon         | 2.5mm (.098") | 35–37 mm (1 <sup>3</sup> / <sub>8</sub> "–1 <sup>7</sup> / <sub>16</sub> "         |             |               |
| DF-700030142   | Composite rigid insole                  | 70% Glass / 30% Carbon         | 2.5mm (.098") | 38–40 mm (1 <sup>1</sup> / <sub>2</sub> "–1 <sup>9</sup> / <sub>16</sub> "         |             |               |
| DF-700030143   | Composite rigid insole                  | 70% Glass / 30% Carbon         | 2.5mm (.098") | 41–43 mm (1 <sup>5</sup> / <sub>8</sub> "–1 <sup>11</sup> / <sub>16</sub> "        |             |               |
| DF-700030144   | Composite rigid insole                  | 70% Glass / 30% Carbon         | 2.5mm (.098") | 44–46 mm (1 <sup>3</sup> / <sub>4</sub> "–1 <sup>13</sup> / <sub>16</sub> "        |             |               |
| <b>3-D Form (Bidirectional) Insoles — Pair</b>   |   |                                |               |  |             |               |
| DF-700030121   | Composite flexible insole               | 100% Glass                     | 1.5mm (.059") | 35–37 mm (1 <sup>3</sup> / <sub>8</sub> "–1 <sup>7</sup> / <sub>16</sub> "         |             |               |
| DF-700030122   | Composite flexible insole               | 100% Glass                     | 1.5mm (.059") | 38–40 mm (1 <sup>1</sup> / <sub>2</sub> "–1 <sup>9</sup> / <sub>16</sub> "         |             |               |
| DF-700030123   | Composite flexible insole               | 100% Glass                     | 1.5mm (.059") | 41–43 mm (1 <sup>5</sup> / <sub>8</sub> "–1 <sup>11</sup> / <sub>16</sub> "        |             |               |
| DF-700030121   | Composite flexible insole               | 100% Glass                     | 1.5mm (.059") | 44–46 mm (1 <sup>3</sup> / <sub>4</sub> "–1 <sup>13</sup> / <sub>16</sub> "        |             |               |
| <b>3-D Form (Bidirectional) Arch Support Blanks — Each</b>   |   |                                |               |  |             |               |
| DF-700500  | Full length rigid arch support blank    | 70% Glass / 30% Carbon         | 2.1mm (.08")  | 0–23 cm (0"–9")  |             |               |
| DF-700520  | Full length rigid arch support blank    | 70% Glass / 30% Carbon         | 2.1mm (.08")  | 23–26 cm (9"–10 <sup>1</sup> / <sub>4</sub> ")                                     |             |               |
| DF-700530  | Full length rigid arch support blank    | 70% Glass / 30% Carbon         | 2.1mm (.08")  | 26–32 cm (10 <sup>1</sup> / <sub>4</sub> "–12 <sup>5</sup> / <sub>8</sub> ")       |             |               |
| DF-700540  | Full length flexible arch support blank | 70% Glass / 30% Carbon         | 1.5mm (.059") | 0–23 cm (0"–9")  |             |               |
| DF-700550  | Full length flexible arch support blank | 70% Glass / 30% Carbon         | 1.5mm (.059") | 23–26 cm (9"–10 <sup>1</sup> / <sub>4</sub> ")                                     |             |               |
| DF-700560  | Full length flexible arch support blank | 70% Glass / 30% Carbon         | 1.5mm (.059") | 26–32 cm (10 <sup>1</sup> / <sub>4</sub> "–12 <sup>5</sup> / <sub>8</sub> ")       |             |               |
| <b>U-D Form (Unidirectional) Ankle Inserts — Each</b>  |   |                                |               |  |             |               |
| DF-700100  | Ankle insert                            | 70% Glass / 30% Carbon         | 1.5mm (.059") | Small (4 <sup>1</sup> / <sub>4</sub> " length)                                     |             |               |
| DF-700110  | Ankle insert                            | 70% Glass / 30% Carbon         | 2.55mm (.1")  | Medium (5 <sup>1</sup> / <sub>4</sub> " length)                                    |             |               |
| DF-700120  | Ankle insert                            | 70% Glass / 30% Carbon         | 2.55mm (.1")  | Large (6 <sup>1</sup> / <sub>4</sub> " length)                                     |             |               |
| DF-700130  | Ankle insert                            | 70% Glass / 30% Carbon         | 2.55mm (.1")  | X-Large (7 <sup>1</sup> / <sub>4</sub> " length)                                   |             |               |
| <b>Prefabricated AFO Kits (See specification sheet "Comfil® TFC AFO Kits" for more information)</b>                    |   |                                |               |  |             |               |
| DF-700000  | Solid ankle AFO kit                     | Mixture of different materials | —             | Small  |             |               |
| DF-700005  | Solid ankle AFO kit                     | Mixture of different materials | —             | Medium   |             |               |
| DF-700010  | Solid ankle AFO kit                     | Mixture of different materials | —             | Large  |             |               |
| DF-700200  | Pediatric solid ankle AFO kit           | Mixture of different materials | —             | X-Small  |             |               |
| DF-700050  | Floor reaction AFO kit                  | Mixture of different materials | —             | Small  |             |               |
| DF-700060  | Floor reaction AFO kit                  | Mixture of different materials | —             | Medium   |             |               |
| DF-700070  | Floor reaction AFO kit                  | Mixture of different materials | —             | Large  |             |               |
| <b>Preformed Foot Blanks — Pair (See specification sheet "Comfil® TFC Preformed Foot Blanks" for more information)</b> |   |                                |               | <b>Womens</b>  | <b>Mens</b> | <b>Length</b> |
| DF-024021  | Preformed foot orthotic blanks          | —                              | —             | 5–6  | 4           | ¾             |
| DF-024022  | Preformed foot orthotic blanks          | —                              | —             | 7–8  | 5–6         | ¾             |
| DF-024023  | Preformed foot orthotic blanks          | —                              | —             | 9–10   | 7–8         | ¾             |
| DF-024024  | Preformed foot orthotic blanks          | —                              | —             | 11–12  | 9–10        | ¾             |
| DF-024025  | Preformed foot orthotic blanks          | —                              | —             | 13–14  | 11–12       | ¾             |

<sup>1</sup> = Percentage of fibers in material

**Comfil® TFC » Equipment and Fabrication**

**Please note:** Items listed below are recommended for the successful use of Comfil® TFC.

**Equipment**

| Item No.     | Description  |
|--------------|--|
| DF-34870     | Steinel heat gun (Model HG2310LCD)                       |
| DF-600345    | Rubber coated heat resistant forming gloves (Pair)       |
| DF-600350    | TFC angled scissor shears                                |
| DF-600355    | Hand steam roller (1½" width)                            |
| DF-600500    | Consolidation stand with hose and water reduction filter |
| DF-700070010 | Silicone working glove                                   |

**Fabrication**

| Item No.     | Description  | Thickness        | Size                     | Unit      |
|--------------|--|------------------|--------------------------|-----------|
| DF-600300    | Comfil® TFC starter kit (includes the following four items plus 10' of DF-600335:) |                  |                          | Kit       |
| DF-600311    | Double-sided sealing tape (green)  | 3.2mm (1/8")     | 13mm (1/2") width        | Each      |
| DF-600315    | High temperature Teflon® tape  | —                | 25mm (1") width          | Each      |
| DF-600320    | Silicone sheeting  | 0.79mm (.031")   | 914 x 914 mm (36" x 36") | Each      |
| DF-600331    | Vacuum bag (DT-1000)   | —                | 457 x 762 mm (18" x 30") | 12 / Pack |
| DF-600335    | Red Inner Release Thin Film (A4000r.001)   | 0.025mm (.0049") | 635mm (25") width        | Foot      |
| DF-600319    | Silicone sheeting for bladders   | 1.6mm (.063")    | 914 x 914 mm (36" x 36") | Each      |
| DF-700070021 | Comfil® L-Pet stockinette  | 0.25mm (.0098")  | 100 x 30000 mm           | Roll      |
| DF-700070024 | Comfil® L-Pet stockinette  | 0.25mm (.0098")  | 180 x 27000 mm           | Roll      |
| DF-700070031 | PET-black high temp stockinette  | 0.25mm (.0098")  | 100 x 30000 mm           | Roll      |
| DF-700070034 | PET-black high temp stockinette  | 0.25mm (.0098")  | 180 x 27000 mm           | Roll      |