Standard White Thermoplastics
CIVCO RT Technical Data Sheet

Standard White Thermoplastics feature standard perforation, combination of perforation and solid thermoplastic bands and other unique patterns that offer a more open feel yet maintain rigidity and reproducibility. These thermoplastics are available in a variety of lengths and thicknesses and are compatible with Type-S™ or Uni-frame® Patient Positioning Systems. For a full list of available thermoplastic part numbers, please visit www.civcort.com.

Product Configuration

**Type-S™ IMRT Reinforced™**

<table>
<thead>
<tr>
<th>Style</th>
<th>Length</th>
<th>Width</th>
<th>Height</th>
<th>Thickness</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTAPUID1824</td>
<td>310 L</td>
<td>266 W</td>
<td>20 H</td>
<td>2.4 mm</td>
<td>0.36 lbs</td>
</tr>
<tr>
<td>MTAPUID1832</td>
<td>279 L</td>
<td>254 W</td>
<td></td>
<td>3.2 mm</td>
<td>0.55 lbs</td>
</tr>
</tbody>
</table>

**Uni-frame® IMRT Reinforced**

<table>
<thead>
<tr>
<th>Style</th>
<th>Length</th>
<th>Width</th>
<th>Height</th>
<th>Thickness</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTAPUI1824</td>
<td>279 L</td>
<td>254 W</td>
<td></td>
<td>2.4 mm</td>
<td>0.55 lbs</td>
</tr>
<tr>
<td>MTAPUI1832</td>
<td></td>
<td></td>
<td></td>
<td>3.2 mm</td>
<td>0.55 lbs</td>
</tr>
</tbody>
</table>
Type-S™ FreedomView™

Type-S FreedomView IMRT Style 18
Head Only
0.5 lbs (0.23 kg)
310 L x 266 W x 20 H (mm)
MTAPUID1832CL
3.2 mm thickness

Type-S FreedomView IMRT Style 27
Head, Neck & Shoulders with Neck Relief
1.3 lbs (0.59 kg)
483 L x 606 W x 20 H (mm)
MTAPSID27NR32CL
3.2 mm thickness

Uni-frame® FreedomView

Uni-frame IMRT FreedomView IMRT Style 18
Head Only
0.55 lbs (0.25 kg)
279 L x 254 W x 7 H (mm)
MTAPUI1832CL
3.2 mm thickness

Uni-frame IMRT FreedomView IMRT Style 18
Head Only
0.4 lbs (0.18 kg)
279 L x 254 W x 14 H (mm)
MTAPUIR1832CL, Reloadable
3.2 mm thickness
**Type-S™ ClearVision™**

**Type-S ClearVision**
- Head Only
- 0.5 lbs (0.23 kg)
- 308 L x 266 W x 20 H (mm)
- MTVRT20
- 3.2 mm thickness

**Uni-frame® ClearVision**
- Uni-frame ClearVision
- Head Only, Wide
- 0.3 lbs (0.15 kg)
- 278 L x 254 W x 7 H (mm)
- MTVRTW
- 3.2 mm thickness

---

**Type-S ClearVision 2**

**Type-S ClearVision 2**
- Head Only
- 0.5 lbs (0.23 kg)
- 310 L x 266 W x 20 H (mm)
- MTAPUID1832SG
- 3.2 mm thickness

**Type-S ClearVision 2**
- Head, Neck & Shoulders
- 1.4 lbs (0.63 kg)
- 483 L x 606 W x 20 H (mm)
- MTAPSID2732SG
- 3.2 mm thickness

---

[Image of CIVCO Radiotherapy logo]
**Type-S™ Standard Perforation**

**Type-S Standard Perforation**
- Head Only
- 310 L x 266 W x 20 H (mm)
- MTAPUD2.4
  - 2.4 mm thickness
  - 0.37 lbs (0.17 kg)
- MTAPUD
  - 3.2 mm thickness
  - 0.45 lbs (0.20 kg)

**Uni-frame® Standard Perforation**

**Uni-frame Standard Perforation**
- Head Only
- 275 L x 254 W x 7 H (mm)
- MTAPU2.4
  - 2.4 mm thickness
  - 0.3 lbs (0.15 kg)
- MTAPU
  - 3.2 mm thickness
  - 0.5 lbs (0.23 kg)

**Type-S Standard Perforation**
- Head, Neck & Shoulders
- 483 L x 606 W x 20 H (mm)
- MTAPSD2.4
  - 2.4 mm thickness
  - 1.05 lbs (0.48 kg)
- MTAPSD3.2
  - 3.2 mm thickness
  - 1.05 lbs (0.48 kg)

**Uni-frame Standard Perforation**
- Head Only Wide
- 275 L x 254 W x 7 H (mm)
- MTAPUW2.4
  - 2.4 mm thickness
  - 0.35 lbs (0.16 kg)
- MTAPUW
  - 3.2 mm thickness
  - 0.37 lbs (0.17 kg)
## Technical Details

<table>
<thead>
<tr>
<th></th>
<th>2.4 Standard Perforation</th>
<th>3.2 Standard Perforation</th>
<th>2.4 IMRT Reinforced</th>
<th>3.2 IMRT Reinforced</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Materials</strong></td>
<td>Polycaprolactone, White ABS</td>
<td>Polycaprolactone, White ABS</td>
<td>Polycaprolactone, White ABS</td>
<td>Polycaprolactone, White ABS</td>
</tr>
<tr>
<td><strong>Attenuation</strong></td>
<td>6MV: 0.53%</td>
<td>6MV: 0.72%</td>
<td>6MV: 0.81% (solid region)</td>
<td>6MV: 1.09% (solid region)</td>
</tr>
<tr>
<td></td>
<td>18MV: 0.03%</td>
<td>18MV: 0.12%</td>
<td>18MV: 0.21% (solid region)</td>
<td>18MV: 0.21% (solid region)</td>
</tr>
<tr>
<td><strong>Thickness</strong></td>
<td>2.4 mm (.094&quot;)</td>
<td>3.2 mm (.125&quot;)</td>
<td>2.4 mm (.094&quot;)</td>
<td>3.2 mm (.125&quot;)</td>
</tr>
<tr>
<td><strong>Perforation (surface)</strong></td>
<td>38% (Standard)</td>
<td>38% (Standard)</td>
<td>Varies (IMRT Pattern)</td>
<td>Varies (IMRT Pattern)</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>1.145 g/cm³</td>
<td>1.145 g/cm³</td>
<td>1.145 g/cm³</td>
<td>1.145 g/cm³</td>
</tr>
<tr>
<td><strong>Surface feeling</strong></td>
<td>Smooth</td>
<td>Smooth</td>
<td>Smooth</td>
<td>Smooth</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Biocompatible</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Transparent when activated</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Activation temperature</strong></td>
<td>75° C / 165° F</td>
<td>75° C / 165° F</td>
<td>75° C / 165° F</td>
<td>75° C / 165° F</td>
</tr>
<tr>
<td><strong>Activation time</strong></td>
<td>4 min (Head-only) 6 min (H, N &amp; S)</td>
<td>4–7 min (Head-only) 6 min (H, N &amp; S)</td>
<td>4–7 min (Head-only) 6 min (H, N &amp; S)</td>
<td>5 min (Head-only) 7–9 min (H, N &amp; S)</td>
</tr>
<tr>
<td>*<em>Molding time (maximum)<em>a</em></em></td>
<td>1 min 15 sec</td>
<td>N/A</td>
<td>1 min 30 sec</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Hardening time*b</strong></td>
<td>8 min 45 sec</td>
<td>N/A</td>
<td>8 min 30 sec</td>
<td>N/A</td>
</tr>
<tr>
<td>*<em>Time to completion (minimum)<em>c</em></em></td>
<td>10 min</td>
<td>10 min</td>
<td>10 min</td>
<td>10 min</td>
</tr>
</tbody>
</table>

---

*a* Molding time may be affected by factors such as temperature and humidity.

*b* Hardening time may be affected by factors such as temperature and humidity.

*c* Time to completion includes activation time.
## Product Details

<table>
<thead>
<tr>
<th><strong>Indications for use</strong></th>
<th>Head &amp; Neck Immobilization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contraindications</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>MRI Compatible</strong></td>
<td>MR Safe</td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td>Connects to Universal Couchtop™ and Baseplates with Type-S™ or Uni-frame® connection</td>
</tr>
<tr>
<td><strong>FDA Clearance</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>CE Marked (EU DOC)</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Other Country Registrations</strong></td>
<td>Available upon request</td>
</tr>
<tr>
<td><strong>Country of Manufacture</strong></td>
<td>USA</td>
</tr>
</tbody>
</table>

### Packaging Details

<table>
<thead>
<tr>
<th><strong>Unit Pack</strong></th>
<th>1 Piece</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Units / Box</strong></td>
<td>5 Pieces</td>
</tr>
<tr>
<td><strong>Shelf Life</strong></td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Test Procedures used to Acquire Data

**Definitions***

- a. **Molding Time** - the time frame available from when the mask is removed from the waterbath to the time that the mask can no longer be molded or formed.
- b. **Hardening Time** - the time between the molding and completion time where the mask should be cooling and hardening on its own without being manipulated or molded.
- c. **Time to Completion** - the total time from when the mask is taken out of the waterbath or dry heat oven to when the mask can be removed from the patient.

**Attenuation Test Conditions**

- a. 100 cm SAD
- b. 10 x 10 cm Field Size
- c. 6 MV Dmax = 1.5 cm
  - 18 MV Dmax = 3.0 cm