

## Technical Data Sheet

Issue: 08/2021/v12

Product-Line: HTX-S0, HTX-RS0, HTX-PD0, HTX-PS0, HTX-PN0, HTX-D0, HTX-TD0, HTX-PC0  
Material: Polyolefin 0-halogen, shrink ratio 2:1 (NZH201B)  
TEXTIT-Material-Code: TMC-1046

### Material data:

<b>Description</b>	Halogen free, flame retardant, heat shrinkable polyolefin tubing with the highest printability properties for identification purposes. The compound of the tubing is excluded for halogens and offers excellent fire safety characteristics combined with minimal smoke emission.
<b>Standard Colours</b>	Yellow, white
<b>Available Colours</b>	Light blue, light red, black, orange, light green
<b>Material</b>	Polyolefin, 0-halogen, shrink ratio: 2:1 according UL224
<b>Operating temperature</b>	-55°C to +125°C
<b>Minimum shrink temperature</b>	> 90°C
<b>Carrier liner</b> (valid for organized version)	White, non-coated, medium range thermal sensitive paper cardstock Thickness: 185 ± 10 µm Width: 109 mm ± 1,0 mm
<b>Adhesive backing</b> (valid for organized version)	Clear, polyethylene film coated with an acrylic-based pressure sensitive adhesive Thickness: 0,10 mm Width: 72/85 mm
<b>Storage</b>	Store in original packaging Recommended temperature at +10°C to +25°C and 45-55% relative humidity Use within 4 years from date of manufacture
<b>Applications</b>	Common uses include marking, insulation, Wire bundling and mechanical protection

<p><b>Specifications</b></p>	<ul style="list-style-type: none"> <li>• Adherence: MIL-M 81531 AS (SAE-AS81531-1998), point 4.6.2 Passed with following black ribbons: = &gt; FTA-R-ribbon</li> <li>• Resistance to solvents: DIN EN 50 343, part 7.6 and annex H Passed with following black ribbons: = &gt; FTA-R-ribbon</li> <li>• MIL-STD.-202G test method 215 2002 (recovered condition), MIL-M81531/AS SAE-AS81531-1998 clause 3.4.3 (recovered condition) Passed with following black ribbons: = &gt; FTA-R-ribbon</li> <li>• Smoke density, passed according to: CEN/TS 45545-2: 2009 (optical density) NF X 10-702 (refer to NF F 16-101) ASTM 662 and BS 6853 D 8.3</li> <li>• Toxit Gas Emission, passed according to: BS EN 6853 Ap. B1 NF X 70-100 (refer to NF F 16-101) SMP 800C</li> <li>• Ignitability to direct impingement of flame passed according EN ISO 11925-2:2010</li> <li>• Burning behaviour passed according CEN/TS 45545-2: 2009 (oxygen index)</li> <li>• Requirements for fire behaviour passed according CEN/TS 45545-2: 2009 (materials and components) UNI CEI 11170-3 Ed. 2005 + FA 2007 acceptance criteria equipment for materials and electrical and electronic components for all Hazard levels until LR4 included</li> </ul>
<p><b>RoHS-compliant</b></p>	<p>Yes</p>

<b>Physical Properties</b>		
<b>Properties</b>	<b>Test Method</b>	<b>Typical value</b>
Tensile strength	ASTM D 638	13 N/mm <sup>2</sup>
Elongation at break	ASTM D 638	200 %
Longitudinal change	EN 60684-2-9	≤ +5%, ≤ -10%
Water absorption	ASTM D 570	≤ 0,15%
Specific gravity	ASTM D 792	1,4 g/cm <sup>3</sup>

<b>Electrical Properties</b>		
<b>Properties</b>	<b>Test Method</b>	<b>Typical value</b>
Dielectric strength	ASTM D 2671	20 kV/mm <sup>2</sup>
Volume resistivity	ASTM D 257	10 <sup>14</sup> Ω cm

<b>Chemical Properties</b>		
<b>Properties</b>	<b>Test Method</b>	<b>Typical value</b>
Fungus resistance	AMS-DTL-7444	Inert, no growth
Chemical resistance	EN 60684-2-36	Good: pass
Copper corrosion	EN 60684-2-33	No chemical interaction: pass
Oxygen index	ASTM D 2863	36%

<b>Printer recommended</b>
<ul style="list-style-type: none"> <li>- TEXTIT DRU-TX4/300</li> <li>- TEXTIT-DRU-TX4M/300</li> <li>- TEXTIT-DRU-TD4M/300</li> </ul>

<b>Ribbon for print-specifications EN 50 343</b>
<ul style="list-style-type: none"> <li>- FTA-R-100x300-BK</li> <li>- FTA-R-060x300-BK</li> </ul>

Thermal Properties		
Properties	Test Method	Typical value
Heat shock 4h at 175°C	EN 60684-2-6	Pass Tensile strength and Elongation at break
Heat aging 168 h at 150°C	ASTM D 638	Elongation 100%
Low temperature bending / flexibility (1h at -55°C)	EN 60684-2-9	No cracking, break detachment of coating
Flammability	ASTM D 2671 DIN 5510-2	Pass » flame retardant Classified SR2 ST2

Dimensions				
Size, Inches	Size, mm	Minimum ID as supplied	Maximum ID, recovered	Recovered wall thickness, mm
3/32	2,4	2,4	1,2	0,43 - 0,60
1/8	3,2	3,2	1,6	0,55 - 0,72
3/16	4,8	4,8	2,4	0,55 - 0,72
1/4	6,4	6,4	3,2	0,65 - 0,80
3/8	9,5	9,5	4,8	0,65 - 0,75
1/2	12,7	12,7	6,4	0,65 - 0,75
3/4	19,0	19,0	9,5	0,65 - 0,75
1	25,4	25,4	12,7	0,70 - 0,85
1 ¼	31,8	31,8	16,0	0,75 - 0,90
1 ½	38,1	38,1	19,1	0,85 - 1,00