



Slitting Services

Thermoset and Thermoplastic Unitape Slitting

Overview

TenCate has in house slitting capabilities for unidirectional tapes. This equipment can produce either **thermoset and thermoplastic slit tapes** for ATL applications. This provides improved lead times, and material control for TenCate customers.

Thermoset and Thermoplastic Slit Tapes

While ATL of thermoset unidirectional tapes is common practice in the composites industry, thermoplastic unidirectional tapes in ATL form are a proven fabrication method. Typically in thermoplastic ATL applications a robotic head with a laser or hot gas heat source heats the tape and the robotic head directs and consolidates the tape. This allows complex structure to be fabricated with automation. Thermoplastic tapes offer two advantages over thermoset tape laying in that 1) thermoplastic tapes have an indefinite shelf life at ambient which means control of outtime is not necessary and 2) the consolidation of thermoplastic tapes means no secondary cure is required. Once the tapes is heated, placed and compacted, it is complete.

More recently, thermoplastic slit tapes have been secondarily braided. This braided form allows easy fabrication of tubular and curved structures. Braided composites made from thermoplastic slit tapes can be used in a variety of applications including:

- Aircraft Seat Frames
- Structural Tubes
- Pipe
- Driveshafts

TENCATE SLIT TAPE OPTIONS

<p>Slit Tape Widths:</p> <ul style="list-style-type: none"> • Thermoset.....1/8, 1/4, 5/16 inches • Thermoplastic.....1/8, 1/4, 1/2 inches 	<p>CORE TYPES:</p> <p>Pancake Wound</p> <ul style="list-style-type: none"> • Slit width plus 0.25 inches on core <i>All tapes >0.5 inches are pancake wound.</i> <p>Traverse Wound</p> <ul style="list-style-type: none"> • 3 inch ID x 11 inch length • DIN250 ID 0.866" core, 9.7" diameter
<p>Splice Methods:</p> <ul style="list-style-type: none"> • Thermal, tape or none. 	<p>Other: Thermoset only</p> <ul style="list-style-type: none"> • Yellow poly 2.5 mils by 0.5" thick available

TENCATE ADVANCED COMPOSITES

www.tencateadvancedcomposites.com | E-mail: info@tcac-usa.com

