

## CRANE SUBPAN

### SUBPAN PANELS PRODUCT CODE: LTR

#### PRODUCT

Crane LTR is a fiberglass reinforced plastic (FRP) product panel. It is a lightweight, durable, semi-rigid panel that is more cleanable, more stain resistant, and more abrasion resistant than competitive FRP panels.

#### PURPOSE

Crane LTR is specifically designed and formulated for use as a subpan in recreational vehicles.

### DESIGN PROPERTIES

PRODUCT CODE	NOMINAL THICKNESS	NOMINAL WEIGHT	FINISH	WIDTH	Color
LTR	0.06"   1.5 mm	0.33lb/ft <sup>2</sup>   1.6 kg/m <sup>2</sup>	Embossed	18" - 104" 2.0 mm - 2.6 mm	White   85

### PHYSICAL PROPERTIES

PROPERTY	LTR	TEST METHOD
FLEXURAL STRENGTH	19 x 10 <sup>3</sup> psi   131 MPa	ASTM - D790
FLEXURAL MODULUS	0.7 x 10 <sup>3</sup> psi   4826 MPa	ASTM - D790
TENSILE STRENGTH	10 x 10 <sup>3</sup> psi   59 MPa	ASTM - D638
TENSILE MODULUS	1.0 x 10 <sup>6</sup> psi   6895 Mpa	ASTM - D638
BARCOL HARDNESS	40	ASTM - D2583
COEFFICIENT OF LINEAR THERMAL EXPANSION	1.5 x 10 <sup>-5</sup> in/in/°F   27 µm/m/°C	ASTM - D696
WATER ABSORPTION	0.3%/24hrs@77°F   25°C	ASTM - D570
THERMAL CONDUCTIVITY	0.4 BTU•in/hr•ft <sup>2</sup> /°F   5.0 cal•cm/hr•m <sup>2</sup> /°C	ASTM - C177
SPECIFIC GRAVITY	1.4	ASTM - D792





## SPECIFICATIONS

Crane Composites panels are manufactured in lengths and widths as required.

## COMPOSITION

Reinforcement: Random chopped fiberglass roving.  
Resin Mix: Modified polyester resin and inorganic fillers and pigments.

## FINISHED PANEL QUALITY

Panels shall have smooth finish on the front side. Color shall be uniform throughout. Backside imperfections, which do not affect functional properties, are not cause for rejection.

Physical properties shall be as set forth in Table 1.

Dimensions shall be as specified on purchase order, subject to the following tolerances:

WIDTH:  $\pm 1/8"$  ( $\pm 3.2$  mm)  
LENGTH:  $\pm 1/8"$  ( $\pm 3.2$  mm) up to 8' (2.4 m)  
 $\pm 1/4"$  ( $\pm 6.4$  mm) up to 40' (12.2 m)  
SQUARENESS:  $1/8"$  (3.2 mm) in 48" (1.2 m) of width

Disclaimer: Crane Composites, Inc. (called CCI hereafter) does not make any claims to the combustibility rating of the products listed on this data sheet. Not intended for interior applications.

## FABRICATING RECOMMENDATIONS

NOTE: Protect your eyes with goggles; cover your nose and mouth with a filter mask; cover exposed skin when cutting CCI panels.

HAND FABRICATING: Drilling—High speed drill bit (60° cutting angle, with 12°-15° clearance) or hole saw.

STAPLING: Standard pneumatic stapler.

CUTTING: Sheet metal shears or circular saw with reinforced carborundum or carbide-tipped blade.

PRODUCTION FABRICATING: Use carbide-tipped tools. Straight cuts can be sheared (90° cutting edge with 0.002" [0.05 mm] clearance) or sawed. For irregular cuts, use die punch or band saw.

PAINTING PREPARATION: To properly prepare the panel surface for painting, make sure the surface is clean, dry, and free from all oils, grease, silicones, dust, and other contaminants. Alkaline detergents or clean water may be used for this purpose. Sanding or roughening of the panel surface is recommended to achieve acceptable paint adhesion.

Use 600 grit or finer sand paper or a 3M "Ultrafine" Scotch-Brite® pad should be used.

RV CLEANING INSTRUCTIONS: Available from CCI.

## STORAGE REQUIREMENTS

Crane Composites panels are designed for peak performance prior to and after the panels have been applied. Careful handling during the manufacturing process is important. Avoid excessive clamping, dropping and scraping. Keep contents dry. Store indoors in a well ventilated area.

## PLEASE NOTE THE FOLLOWING PRODUCT USE INFORMATION:

Products manufactured by CCI will provide a clean, aesthetically pleasing finished installation. However, by nature, fiberglass reinforced plastic panels may occasionally have small areas that are aesthetically unacceptable for use. Panels should be inspected on-site prior to installation or lamination and original CCI skid tag/ticket number removed and retained. If any portion of material will not provide an acceptable appearance, CCI should be notified at once. Please report the non-conforming product utilizing the retained skid tag/ticket number. Upon verification of unacceptability, CCI will replace or refund the purchase price of the non-conforming product.

## CERTIFICATION

1. Meets USDA/FSIS requirements
2. Meets FMVSS 302 requirements.
3. Product identified by 2 blue threads on the back.

## CLEANING INSTRUCTIONS

Available from CCI.

## DESIGN DATA NOTES

Bulk coil may be ordered in long lengths or in specific cut-to-size pieces. Crane Composites reserves the right to manufacture and ship total linear footage of long length bulk coils ordered within the following parameter lengths per piece:

Min.	200' (61.0 m)
Max.	500' (152.4 m) for 0.09" and 0.120"
	700' (213 m) for 0.06" and 0.075"

Cut-to-size lengths 12' (3.7 m) and over of the same width will be interlapped (18"-36" [457.2 mm-914.4 mm] interlap per panel) into a coil for ease of handling and shipping. Total length tolerance - 0" and +6" (-0 mm and +152.4 mm).

## STAINING STATEMENT

Some staining/discoloration may occur to frp liner panels after they have been in service for several years. This is a normal wear condition. As long as acceptable cleaning methods (i.e., steam cleaning) are used, the surface should remain sanitary and acceptable.