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# SUNTUF®

## PRODUCT DESCRIPTION

Suntuf was the first polycarbonate sheeting available in Australia, and while its immediate success created a flood of imitations, the Suntuf brand has continued to set the standard.

Polycarbonate technology is a very complex and advanced science. It's mastery doesn't happen overnight. It takes skill, dedication and long term commitment to fully realise its potential. Our "co-extrusion" manufacturing process (CO-EX™), is the result of more than a decade of painstaking research and development in Australia and overseas.

The CO-EX™ process fuses together the polycarbonate and the built in UV barrier at the molten moment of the sheet's creation, to eliminate any chance of delamination for the life of the sheet.

There's no doubt Suntuf started a roofing revolution in Australia, which is very important when considering which polycarbonate roofing to buy.

In late 1998 Suntuf released their new generation super cool polycarbonate - *Solar Control*, with an extremely low Shading Coefficient of 0.36.

Suntuf sheeting was the first and remains the sheet by which others are judged.

## PRODUCT SPECIFICATION

### **SHEET PROFILES:**

Corrugated, Greca, Omega, Trimdek / TL5, Spantuf, KingKlip

### **SHEET DIMENSIONS:**

	<b>Overall Width</b>	<b>Cover Width</b>	<b>Profile Height</b>	<b>Thickness</b>
Corrugated	860mm	760mm	17mm	0.8mm
Greca	1260mm	1210mm	18mm	0.8mm
Omega	810mm	760mm	16mm	0.8mm
Hi-Rib	810mm	760mm	29mm	0.8 or 1.0mm
Spantuf	750mm	700mm	29mm	1.0mm
KingKlip	747mm	700mm	42mm	1.2mm

**NB:** Overall and cover widths are approximate.

### **LENGTH:**

1800, 2100, 2400, 2700, 3000, 3600, 4200, 4800, 5400, 6000 and 7200mm.

### **COLOUR:**

Clear, Solar Grey, Cedar Bronze, Opal, Mist Green, Smooth Cream  
Solar Control Metallic Grey and Metallic Ice plus near clear diffused sheet.

# SUNTUF®

## PERFORMANCE CHARACTERISTICS

### MECHANICAL PROPERTIES:

Modulus of Elasticity:	24,000 kg/cm <sup>2</sup>
Flexural Strength:	890 kg/cm <sup>2</sup>
Tensile Strength:	670 kg/cm <sup>2</sup>
Yield Stress:	420 kg/cm <sup>2</sup>
Elongation:	>80%

### THERMAL PROPERTIES:

Coefficient of Thermal Expansion:	6.75 x 10 to the power of -5 cm/cm°C
Long-Term Service Temperature:	-30°C to +120°C
Thermal Conductivity:	4.6 x 10 to the power of -4 cm/cm°C
"U" Value:	5.8 w/m <sup>2</sup> K

### UV PROPERTIES:

	Erythermal UV (UVB)	Near UV (UVA)
Clear	<0.1%	4.5%
Solar Grey/ Cedar Bronze	<0.1%	1.1%
Opal / Smooth Cream	<0.1%	1.4%
Solar Control	<0.1%	1.3%

### SOLAR PROPERTIES:

	Shading Coefficient
Clear	1.00
Solar Grey	.64
Opal	.59
Cedar Bronze	.57
Smooth Cream	.60
Mist Green	.51
Solar Control	.36

### LUMINOUS PROPERTIES:

	Transmittance
Clear	.89
Solar Grey	.35
Opal	.45
Cedar Bronze	.25
Smooth Cream	.35
Mist Green	.20
Solar Control	.25

# SUNTUF®

## **INSTALLATION INFORMATION**

**CUTTING:** Sheets shall be cut using a circular saw with masonry blade or fine tooth metal blade at low speeds. In addition, shears or a sharp knife may be used depending on sheet thickness.

**DRILLING:** Screw holes shall be pre-drilled with a 10mm metal drill bit at low speeds to compensate for expansion. Shavings should be cleared off prior to fixing.

**OVERLAPPING:** Side laps shall be:

Corrugated	-	1½	Corrugations	(100mm)
Greca / Omega	-	1	Corrugation	(50mm)
Hi-Rib	-	1	Corrugation	(50mm)
Spantuf	-	1	Corrugation	(50mm)

If overlapping is required in the sheet length we recommend a minimum of 200mm for roofs and 100mm for walls.

**FIXING:** Use Suntuf Fasteners (approximately 8 per m<sup>2</sup>)

### **FASTENING:**

**Corrugated:** Use 50mm Suntuf fixings through the crest. Fix top and bottom of sheet every 2<sup>nd</sup> corrugated and in the centre every 3<sup>rd</sup> corrugation.

**Greca / Omega:** Use 50mm Suntuf fixings through the crest. Fix top and bottom of sheet every 2<sup>nd</sup> corrugated and in the centre of every 3<sup>rd</sup> corrugation. Can also be fitted with 30mm Suntuf fixings through the valley for wall applications.

**Hi-Rib:** Use 65mm Suntuf fixings through every crest.

**Spantuf:** Use 65mm Suntuf fixings through every second crest.

**ROOF FALL:** A minimum pitch of 5° is recommended (87/1000mm).

	<b>Min. Cold Curving Radius</b>	<b>Max. Overhang</b>	<b>Max. End Spans</b>	<b>Max. Mid Spans</b>
Corrugated	4000mm	50mm	800mm	1000mm
Greca / Omega	4000mm	50mm	900mm	1200mm
Hi-Rib	N/A	50mm	900mm	1400mm
Spantuf	N/A	50mm	900mm	1400mm

## EARLY FIRE HAZARD TEST AS1530-3 1989

(AMDT No. 1 Apr '92)

**TESTING AUTHORITY:** AWTA TEXTILE TESTING

**TEST NUMBER:** 7-441933-UV

**DATE:** 7 September 1992

**SAMPLE DESCRIPTION:** SUNTUF Hi-Rib (Grey), Spantuf (Opal)

**MATERIAL SPECIFICATION:** Nom Composition: Polycarbonate  
Nom Thickness: 1.0mm  
Nom Mass: 1.5 kg/m<sup>2</sup>

<b>RESULTS</b>	<b>MEAN</b>	<b>STANDARD ERROR</b>
Ignition Time	N/A min	N/A
Flame Propagation Time	N/A s	N/A
Heat Release Integral	N/A kJ/m <sup>2</sup>	N/A
Smoke Release, Log D	N/A	N/A
Optical Density, D	N/A /m	
Number of Specimens Ignited:	0	
Number of Specimens Tested:	9	

### **REGULATORY INDICES**

Ignitability Index	0	RANGE 0-20
Spread Of Flame Index	0	RANGE 0-10
Heat Evolved Index	0	RANGE 0-10
Smoke Developed Index	0-1	RANGE 0-10

# SUNTUF®

## EARLY FIRE HAZARD TEST AS1530-3 1989

(AMDT No. 1 Apr '92)

**TESTING AUTHORITY:** AWTA TEXTILE TESTING

**TEST NUMBER:** 7-448693-CV

**DATE:** 25 January 1995

**SAMPLE DESCRIPTION:** SUNTUF Corrugated and Greca

**MATERIAL SPECIFICATION:** Nom Composition: Polycarbonate  
Nom Thickness: 0.8mm  
Nom Mass: 1.2 kg/m<sup>2</sup>

<b>RESULTS</b>	<b>MEAN</b>	<b>STANDARD ERROR</b>
Ignition Time	N/A min	N/A
Flame Propagation Time	N/A s	N/A
Heat Release Integral	N/A kJ/m <sup>2</sup>	N/A
Smoke Release, Log D	-2.6973	0.2848
Optical Density, D	0.0075 /m	
Number of Specimens Ignited:	0	
Number of Specimens Tested:	6	

### **REGULATORY INDICES**

Ignitability Index	0	RANGE 0-20
Spread Of Flame Index	0	RANGE 0-10
Heat Evolved Index	0	RANGE 0-10
Smoke Developed Index	0-1	RANGE 0-10

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## Certificate of Compliance

**SANDBAG IMPACT TEST:** AS/NZS1562-3: 1996 - Design and installation of sheet roof and wall cladding - Plastics (Formerly AS2424)

**TESTING AUTHORITY:** CIVILTEST  
**DATE:** 10 February 1993

**SAMPLE DESCRIPTION:** SUNTUF CORRUGATED

**MATERIAL SPECIFICATION:** Nom. Thickness: 0.8 mm  
Nom. Mass: 1.2 Kg/m<sup>2</sup>  
Width: 860mm

### SPECIMEN FIXING:

<b><u>Specimen fixing method:</u></b> End Purlin Middle Purlin Overlaps	Every 2nd top wave Every 2nd top wave Every top wave in every purlin
<b><u>Screw type:</u></b> Top Wave	Buildex TEK 5.5 x 35mm (5.5 x 50mm T17 for Timber)
<b><u>Washer type:</u></b> End Purlins Mid Purlins	Suntuf Safety Lock Buildex 20mm diameter
<b><u>Purlin spacing (mm)</u></b>	800 - 1000 - 800
<b><u>Supporting frame type</u></b>	50 x 50mm metal profile

### RESULTS:

<b><u>Penetration by the sandbag</u></b>	NO
<b><u>Hole size</u></b> Penetration of 75mm diameter ball	NO
<b><u>Splinters size</u></b>	NO Splinters
<b><u>Formation of vertical gap between adjacent sheets</u></b> Gap size	NO
<b><u>Damage at the test specimen attachment</u></b>	NO

**THE TEST WAS CONSIDERED A PASS FOR END AND MID SPAN IMPACT.**

# SUNTUF®

## Certificate of Compliance

**SANDBAG IMPACT TEST:** AS/NZS1562-3: 1996 - Design and installation of sheet roof and wall cladding - Plastics

**TESTING AUTHORITY:** PALTOUGH LTD  
**DATE:** 1 October 1997

**SAMPLE DESCRIPTION:** SUNTUF GRECA

**MATERIAL SPECIFICATION:** Nom. Thickness: 0.8 mm  
Nom. Mass: 1.2 Kg/m<sup>2</sup>  
Width: 810mm

### SPECIMEN FIXING:

<b><u>Specimen fixing method:</u></b> End Purlin Middle Purlin Overlaps	Every 1 <sup>st</sup> bottom valley + every 1 <sup>st</sup> top wave Every 1 <sup>st</sup> top wave Every top wave in every purlin
<b><u>Screw type:</u></b> Top Wave Bottom Valley	Buildex TEK 5.5 x 35mm (5.5 x 50mm T17 for Timber) Buildex TEK 5.5 x 25mm
<b><u>Washer type:</u></b> Top Wave Bottom Valley	Buildex 19mm diameter Buildex 25mm diameter
<b><u>Purlin spacing (mm)</u></b>	900 - 1200 - 900
<b><u>Supporting frame type</u></b>	50 x 50mm metal profile

### RESULTS:

<b><u>Penetration by the sandbag</u></b>	NO
<b><u>Hole size</u></b>	
<b><u>Penetration of 75mm diameter ball</u></b>	NO
<b><u>Splinters size</u></b>	NO Splinters
<b><u>Formation of vertical gap between adjacent sheets</u></b>	NO
<b><u>Gap size</u></b>	
<b><u>Damage at the test specimen attachment</u></b>	NO

**THE TEST WAS CONSIDERED A PASS FOR END AND MID SPAN IMPACT.**



# Certificate of Compliance

**SANDBAG IMPACT TEST:** AS/NZS1562-3: 1996 - Design and installation of sheet roof and wall cladding - Plastics

**TESTING AUTHORITY:** PALTOUGH LTD

**DATE:** 18 August 1998

**SAMPLE DESCRIPTION:** SUNTUF OMEGA

**MATERIAL SPECIFICATION:** Nom. Thickness: 0.8 mm  
Nom. Mass: 1.2 Kg/m<sup>2</sup>  
Width: 810mm  
1260mm

## SPECIMEN FIXING:

<b><u>Specimen fixing method:</u></b> End Purlin Middle Purlin Overlaps	Every 1 <sup>st</sup> bottom valley Every 3 <sup>rd</sup> bottom valley Every top wave in every purlin
<b><u>Screw type:</u></b> Top Wave Bottom Valley	Buildex TEK 5.5 x 35mm (5.5 x 50mm T17 for Timber) Buildex TEK 5.5 x 25mm
<b><u>Washer type:</u></b> Top Wave Bottom Valley	Buildex 19mm diameter Buildex 25mm diameter
<b>Purlin spacing (mm)</b>	800 - 1000 - 800
<b>Supporting frame type</b>	50 x 50mm metal profile

## RESULTS:

<b>Penetration by the sandbag</b>	NO
<b>Hole size</b>	
<b>Penetration of 75mm diameter ball</b>	NO
<b>Splinters size</b>	NO Splinters
<b>Formation of vertical gap between adjacent sheets</b>	NO
<b>Gap size</b>	
<b>Damage at the test specimen attachment</b>	NO

**THE TEST WAS CONSIDERED A PASS FOR END AND MID SPAN IMPACT.**

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## Certificate of Compliance

**SANDBAG IMPACT TEST:** AS/NZS1562-3: 1996 - Design and installation of sheet roof and wall cladding - Plastics (Formerly AS2424)

**TESTING AUTHORITY:** PALTOUGH  
**DATE:** June 2004

**SAMPLE DESCRIPTION:** SUNTUF TRIMDEK/TL5

**MATERIAL SPECIFICATION:** Nom. Thickness: 1.0 mm  
Nom. Mass: 1.3 Kg/m<sup>2</sup>  
Width: 820mm

### SPECIMEN FIXING:

<b><u>Specimen fixing method:</u></b> End Purlin Middle Purlin Overlaps	Every crest and centre of valley Every crest Every crest and centre of valley
<b><u>Screw type:</u></b> Top Wave Bottom Valley	Buildex TEK 5.5 x 50mm (5.5 x 65mm T17 for Timber) Buildex TEK 5.5 x 25mm
<b><u>Washer type:</u></b> Top Wave	Buildex 25mm diameter
<b><u>Purlin spacing (mm)</u></b>	1200 - 1500 - 1200
<b><u>Supporting frame type</u></b>	50 x 50mm metal profile

### RESULTS:

<b><u>Penetration by the sandbag</u></b>	NO
<b><u>Hole size</u></b> Penetration of 75mm diameter ball	NO
<b><u>Splinters size</u></b>	NO Splinters
<b><u>Formation of vertical gap between adjacent sheets</u></b> Gap size	NO
<b><u>Damage at the test specimen attachment</u></b>	NO

**THE TEST WAS CONSIDERED A PASS FOR END AND MID SPAN IMPACT.**

# SUNTUF®

## Certificate of Compliance

**SANDBAG IMPACT TEST:** AS/NZS1562-3: 1996 - Design and installation of sheet roof and wall cladding - Plastics (Formerly AS2424)

**TESTING AUTHORITY:** CIVILTEST  
**DATE:** November 1991

**SAMPLE DESCRIPTION:** SUNTUF SPANTUF (SPANDEK)

**MATERIAL SPECIFICATION:** Nom. Thickness: 1.0 mm  
Nom. Mass: 1.5 Kg/m<sup>2</sup>  
Width: 750mm

### SPECIMEN FIXING:

<b><u>Specimen fixing method:</u></b> End Purlin Middle Purlin Overlaps	Every 2nd top wave Every 2nd top wave Every top wave in every purlin
<b><u>Screw type:</u></b> Top Wave Bottom Valley	Buildex TEK 5.5 x 50mm (5.5 x 65mm T17 for Timber) Buildex TEK 5.5 x 25mm
<b><u>Washer type:</u></b> Top Wave	Buildex 25mm diameter
<b><u>Purlin spacing (mm)</u></b>	1200 - 1500 - 1200
<b><u>Supporting frame type</u></b>	50 x 50mm metal profile

### RESULTS:

<b><u>Penetration by the sandbag</u></b>	NO
<b><u>Hole size</u></b> Penetration of 75mm diameter ball	NO
<b><u>Splinters size</u></b>	NO Splinters
<b><u>Formation of vertical gap between adjacent sheets</u></b> Gap size	NO
<b><u>Damage at the test specimen attachment</u></b>	NO

**THE TEST WAS CONSIDERED A PASS FOR END AND MID SPAN IMPACT.**

# *SUNTUF*<sup>®</sup>

## **RESISTANCE TO WIND FORCES**

**TESTING AUTHORITY:** CIVIL TEST  
**TEST NUMBER:** C920207  
**DATE:** March, 1994

## **SHEETING DETAILS**

<b>Profile Name</b>	<b>Material</b>	<b>Thickness</b>	<b>Width</b>	<b>Crest Height</b>
HI-RIB	Polycarbonate	1.0mm	820mm	29mm
SPANTUF	Polycarbonate	1.0mm	770mm	24mm

## **FASTENING**

Two methods of fastening were used;

Method 1: Self-drilling tek screw, 50mm and 14g hex head with standard 25mm bonded washers.

Method 2: Self-drilling tek screw, 50mm and 14g hex head with cyclonic assemblies.

## **SPAN RATIOS**

Two different arrangements were used for the testing of HI-RIB and SPANTUF products, reflecting actual roof sheeting practice. "End Span" tests consist of two spans of equal length, with the spans length reflecting realistic rafter spacings. "Internal Span" tests consist of three spans, with two equal length end spans, and the internal span having a length equal to the next standard size up ie. an internal span of 1200mm indicates a three span model with spans of 900/1200/900.

## **PROCEDURE**

The spans were carried out in accordance with AS2424-1981 Plastics Building Sheets - General Installation Requirement and Design of Roofing Systems Section 5 which references the provision of AS1562-1980 Design and Installation of Metal Roofing Clause 5.3.2.

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## RESULTS

### SPANTUF

#### RESISTANCE TO WIND FORCES

##### **Failure Load Results (kPa)**

SPAN (MM)	Crest Fastened with 25mm Bonded Washers			Crest fastened with cyclonic assemblies	
	END every 2 <sup>nd</sup> crest	END every crest	INTERNAL every 2 <sup>nd</sup> crest	END every 2 <sup>nd</sup> crest	INTERNAL every 2 <sup>nd</sup> crest
600	14.2	20.2	N/A	19.4	N/A
900	6.5	12.6	9.7	10.0	13.0
1200	5.5	12.2	7.0	8.4	9.1
1500	3.9	11.1	4.2	N/A	7.8
1800	N/A	N/A	2.2	N/A	3.7

### HI-RIB

#### RESISTANCE TO WIND FORCES

##### **Failure Load Results (kPa)**

SPAN (MM)	Crest Fastened with 25mm Bonded Washers		Crest Fastened with cyclonic assemblies	
	Fastened every crest			
	END	INTERNAL	END	INTERNAL
600	7.2	N/A	13.7	N/A
900	2.9	5.9	5.2	8.2
1200	2.8	3.8	4.4	5.4
1500	N/A	2.6	2.9	4.2
1800	N/A	1.4	N/A	2.0

It is further emphasised that the results presented are ultimate failure loads (unsealed) and are failure pressures.

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## **CYCLONIC TESTING**

**TESTING AUTHORITY:** CIVIL TEST  
**TEST NUMBER:** C930101  
**DATE:** 26 March, 1993

## **TEST SPECIMENS**

A test specimen consisted of one Suntuf corrugated sheet fastened onto four purlins over three spans by appropriate fasteners.

The spans were 600mm on each and with a 900mm mid span. Fixings were 50mm x 12g Type 17 with Trimdeck cyclone assemblies on every crest.

## **PROCEDURE**

Testing was carried out in accordance with AS2424 - 1991. Plastic building sheets - general installation requirements and design of roofing systems with specific modifications in accordance with BCA - NT Appendix July 1990 B 1.2.3. (b).

## **ULTIMATE STRENGTH STATIC TEST**

A uniform test pressure was applied to each test specimen, beginning at a pressure of 4 kPa and increasing the load in increments of 0.5 kPa. The pressure was sustained for 1 minute each time. The pressure was increased until the specimen failed.

## **TEST FOR FATIGUE STRENGTH**

A cyclic load of 10,000 cycles was applied to the specimen as specified by BCA - NT Appendix July 1990 B 1.2.3.(b). A maximum load was applied, and the minimum load in accordance with AS4040.3 - 1992 Clause 6.3 did not exceed 10% of the maximum working load. The rate of cycling did not exceed 3 Hz as specified in Clause 6.3.

After 10,000 cycles, a static load test was performed of 1.8 time the working load as specified by BCA - NT Appendix July 1990 B 1.2.3.(b). This single load was held for 1 minute.

## **RESULTS**

(0.4kPa) - minor cracks appeared after 8000 cycles. These cracks were located around the internal purlin fasteners at an average distance from the edge of the washer of 20mm. After the specified 10,000 cycles, cracks up to 60mm in length around the internal purlin fasteners were evident, however, the sheet remained substantially in position.

The static test load of 7.2 kPa was applied and held for 1 minute with further development of the cracks up to 80mm, but the sheet remained substantially in place. The sheet passed the test according to AS2424-1991 Clause 5.2.2.2. The static test load was increased to 8 kPa (a test factor of 2) with no noticeable further damage. This is considered a pass.

# SUNTUF®

## UV TESTING

**TESTING AUTHORITY:** SKIN CANCER RESEARCH FOUNDATION  
**DATE:** 21 August, 1991

## **PROCEDURE**

Tests were carried out to determine the Ultra-violet protection offered by a range of 'Suntuf' Polycarbonate sheets.

All readings were taken at Royston Park on 21 August, 1991, using an I1.1700 International Light Radiometer with SED240/U.V.B. detector head, which has a response factor of 297 nanometres, plus SEE038/U.V.A. detector head with response factor of 360 nanometres. All readings will be given in microwaves/cm<sup>2</sup>. A direct UV reading was taken and then the polycarbonate sheet placed in contact with the detector head.

## **RESULTS**

Material	Direct UV		Through		Sheet % Block	
	U.V.A.	U.V.B.	U.V.A.	U.V.B.	U.V.A.	U.V.B.
Clear	4.44-3	5.55-4	4.00-5	0.18-6	99.91	99.96
Tint	4.40-3	5.55-4	2.07-5	0.55-6	99.98	99.91
Tint	4.40-3	2.90-4	2.02-5	0.06-6	99.99	99.97
White	4.50-3	2.82-4	2.48-5	0.07-6	99.94	99.97

# *SUNTUF*®

## **DIFFUSE, ULTRAVIOLET & VISIBLE TRANSMISSION TESTS**

**TESTING AUTHORITY:** UNISEARCH LIMITED  
School of Opportunity  
University of New South Wales

**DATE:** 8 February, 1991

### **METHOD 1**

The luminous transmittance, erythema and near ultraviolet transmittance for the uniformly transparent single layer (non Opaque) samples was determined using a Pye Unicam PU8800 03 spectrophotometer with double monochromator, double beam and end on photomultiplier. A wavelength accuracy of within 0.3nm was verified using a Mercury and Neon discharge lamps.

Stray light PU 8800 03 < 0.0005% at 220nm (NaI) Deuterium ar.  
Stray light PU 8800 03 < 0.0001% at 340 nm (NaNO<sub>2</sub>) Tungsten filament.  
Bandwidth for each measurement was 2nm.

### **METHOD 2**

The diffuse transmittance, erythema and near ultraviolet transmittance of the semi-opaque (diffusely transmitting) samples was determined using an Hitachi U-3410 double beam, double monochromator with a photomultiplier detector in the ultraviolet/visible and a lead sulphide detector in the infra-red. To determine diffuse transmittance an Hitachi 151-0030 60mm diameter integrating sphere was fitted. A wavelength accuracy of within 0.3nm was verified using a Mercury and Neon discharge lamps.

Considerable variation in transmittance of diffusely transmitting samples is possible with differences in orientation and the distance of the diffusely transmitting components relative to the integrating sphere entrance port.

Bandwidth for each measurement was 2nm.

### **RESULTS**

Erythema ultraviolet radiation is described according to Australian Standard 1067-1990 Part 1 as ultraviolet radiation of wavelength of less than 325nm that elicits, after sufficient exposure, a delayed response of inflammation or reddening of the human skin. Near ultraviolet radiation is described as radiation in the wavelength range 320nm to 400nm.

Erythema ultraviolet radiation is approximately equivalent to U.V.B. and near ultraviolet radiation is approximately equivalent to U.V.A.

The attached results show the visible or diffuse transmittance (illuminant A) and the arithmetic mean of the transmittance in the range 300nm to 320nm for erythema ultraviolet and the arithmetic mean of the transmittance in the wavelength range 320nm to 400nm for near ultraviolet.

# SUNTUF®

## DEEMED TO COMPLY TABLES

**DEEMED TO COMPLY NUMBER:** M/122/2  
**DATE:** 21 September, 1992  
**MATERIAL SPECIFICATIONS:** CORRUGATED Polycarbonate sheet  
0.8mm thickness

### PROCEDURE

Testing was carried out in accordance with AS2424-199 "Plastics Building Sheets - General Installation Requirements and Design of Roofing Systems" with specific modifications in accordance with BCA - NT Specification B1.2(3b).

Wind loads are in accordance with AS1170-2-1969, "SAA LOADING CODE PART 2 - WIND LOADS" and the tables have been calculated for permissible stress wind speeds  $V_p$ . The tables below set out the three spans for each terrain category and allow for the local pressure factor  $K_l$  as per clauses 3,4,5, of AS1170.2. The racking strength of the cladding should not be included in the design of a structure. Plastic roofing sheets DO NOT provide lateral bracing to roofing purlins or battens.

Plastic roof sheeting is NOT suitable for foot traffic - CRAWL BOARDS MUST BE USED.

**RECOMMEND FASTENERS** Buildex screws and cyclone washers at each crest.

#### Timber Supports

Strength Group	Self drilling screw with cyclone assembly
SOFTWOOD	No. 14-10 x 85mm Type 17
HARDWOOD	No. 14-10 x 50mm Type 17

#### Steel Supports

Steel Thickness	Self drilling & tapping screw with cyclone assembly
3mm Max.	No. 14-10 x 42mm Hi Teks

# SUNTUF®

## PERMISSIBLE STRESS DESIGN WIND PRESSURE (kPa)

from test results

SPAN MM	SINGLE SPAN	END SPAN	INTERNAL SPAN
600	-	4.00	-
900	-	-	4.00
1200	-	-	-

## WIND LOAD FACTORS:

Ms	=	1.00	Mt	=	1.00	Mi	=	1.00
Kp	=	1.00	Ka	=	1.00			

## TABLES

REGION C Vp = 57		ROOF CLADDING Cpe = 0.90				Cpi = 0.80		
height	terrain	Mz	qz	Kj	pz	Allowable Span		
(m)	Cat	cat	kPa		kPa	single	end	internal
5	2.5	0.89	1.54	1.0	2.63	-	600	900
				1.5	3.32	-	600	900
				2.0	4.01	-	600	900

REGION C Vp = 57		ROOF CLADDING for CARPORTS & VERANDAHS Cpa = 1.00				Cpi = 0.00		
height	terrain	Mz cat	qz	Kl	0%	Allowable Span (mm)		
(m)	Cat		kPa		kPa	single	end	internal
6	2.5	0.69	1.54	1.0	1.54	-	600	900
				1.5	2.32	-	600	900
				2.0	3.09	-	600	900

These tables are based on testing carries out by CIVILTEST.

# SUNTUF®

## DEEMED TO COMPLY TABLES

**DEEMED TO COMPLY NUMBER:** M/122/1  
**DATE:** 21 September, 1992  
**MATERIAL SPECIFICATIONS:** SPANTUF Polycarbonate sheet  
1.0mm thickness

### PROCEDURE

Testing was carried out in accordance with AS2424-199 "Plastics Building Sheets - General Installation Requirements and Design of Roofing Systems" with specific modifications in accordance with BCA - NT Specification B1.2(3b).

Wind loads are in accordance with AS1170-2-1969, "SAA LOADING CODE PART 2 - WIND LOADS" and the tables have been calculated for permissible stress wind speeds  $V_p$ . The tables below set out the three spans for each terrain category and allow for the local pressure factor  $K_l$  as per clauses 3,4,5, of AS1170.2. The racking strength of the cladding should not be included in the design of a structure. Plastics roofing sheets DO NOT provide lateral bracing to roofing purlins or battens.

Plastic roof sheeting is NOT suitable for foot traffic - CRAWL BOARDS MUST BE USED.

**RECOMMEND FASTENERS:** Buildex screws and cyclone washers at each crest.

### Timber Supports

Strength Group	Self drilling screw with cyclone assembly
SOFTWOOD	No. 14-10 x 85mm Type 17
HARDWOOD	No. 14-10 x 50mm Type 17

### Steel Supports

Steel Thickness	Self drilling & tapping screw with cyclone assembly
3mm Max.	No. 14-10 x 42mm Hi Tek

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## PERMISSIBLE STRESS DESIGN WIND PRESSURE (kPa) from test results

SPAN MM	SINGLE SPAN	END SPAN	INTERNAL SPAN
600	-	-	-
900	-	5.50	-
1200	-	-	5.50

### WIND LOAD FACTORS:

Ms	=	1.00	Mt	=	1.00	Mi	=	1.00
Kp	=	1.00	Ka	=	1.00			

### TABLES

REGION C		ROOF CLADDING						
Vp = 57		Cpe = 0.90				Cpi = 0.80		
height	terrain	Mz cat	qz	Kj	pz	Allowable Span (mm)		
(m)	Cat		kPa		kPa	single	end	internal
6	2.5	0.89	1.54	1.0	2.63	-	900	1200
				1.5	3.32	-	900	1200
				2.0	4.01	-	900	1200

REGION C		ROOF CLADDING for CARPORTS & VERANDAHS						
Vp = 57		Cpa = 1.00				Cpi = 0.00		
height	terrain	Mz cat	qz	Kl	0%	Allowable Span (mm)		
(m)	Cat		kPa		kPa	single	end	internal
6	2.5	0.89	1.54	1.0	1.54	-	900	1200
				1.5	2.32	-	900	1200
				2.0	3.09	-	900	1200

These tables are based on testing carried out by CIVILTEST.

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## **LIFETIME GUARANTEE**

Suntuf Co-Extruded (CO-EX™) Polycarbonate Sheets are warranted for lifetime from the purchase date, not to lose more than 10% of their transmission. (When tested in accordance with ASTM-B-1033-77).

This discolouration warranty is applicable only in the domestic application and cannot be transferred to second party.

Suntuf CO-EX™ Polycarbonate Sheets are warranted for five years from the purchase date, not to break or fail as a result of the impact of hail measuring up to 25mm.

The above warranties shall apply only if the sheets are installed, used and maintained in accordance with Suntuf recommendations and specifications.

Should a failure occur, you will receive replacement Suntuf sheeting upon presentation of the original invoice/sales receipt to the original retailer, within 28 days of the failure, and provided that any necessary examination procedures have been carried out.

## **Limitations and Exclusions**

The warranty only applies to sheets that are scratch and abrasion free.

The warranties do not cover any loss or damage caused by vandalism, fire disasters of nature or non-compliance with Suntuf sheeting storage or installation recommendations.

These include, general negligence while working or transporting sheets, installation on a structure not conforming to recognised standards of construction, or the loss of light transmission caused by the accumulation of dirt or scratches, or the use of chemicals, paint or any other substances not compatible with polycarbonate.

This warranty covers breakage resultant from hail damage measuring up to 25mm in diameter as measured by the meteorological weather office.

The warranty only applies if the sheets are installed with their UV protected side being exposed.

In the event of a failure, the Suntuf manufacturer shall only be responsible for the replacement, or costs, of the failed sheet, and will not be responsible for any labour or material costs, or consequential damages incurred as a result of the failure.

These warranties do not cover any Suntuf sheeting that has been thermo-formed, or adversely affected by connecting, fastening or sealing.

All other warranties, expressed or implied, are excluded except those statutory warranties non-excludable at law.

*Important: In the unlikely event of a failure, immediate replacement will be possible if you retain your original sales receipt.*