



SUNBATHER FREE POOL ENERGY AUDIT

Please fill out the data collection sheet below and CIRCLE the correct **yes** / no options to discover the most cost-effective to minimise your pool's carbon footprint.

Name: _____ **Complex:** _____ **Phone:** _____

OUTDOOR or INDOOR:

Main Pool:	Length [m]	Width [m]	Average Depth [m]
Diving Pool:	Length [m]	Width [m]	Average Depth [m]
Kids Pool:	Length [m]	Width [m]	Average Depth [m]
Other Pool:	Length [m]	Width [m]	Average Depth [m]
OR	Total surface area [m ²]		Total Volume [m ³]

Bottom Colour? Light / Dark

Desired Water Temperature? _____ °C

Swimmer load? i.e. approx number of swimmers per day: _____

Is the pool shaded? Never / Minor (25%) / Major (50%) / Other? _____ %

Wind Exposure? Sheltered / Normal suburban location / High wind area

If an indoor pool - what is the internal volume of the pool enclosure/building? _____ m³

OR Length [m] Width [m] Height [m]

Is the air inside the enclosure heated? Yes / No

If yes, to what temperature? _____ °C

Is humidity controlled? Yes / No If Yes, to what Relative Humidity _____ %

Is a pool cover used? Yes / No

Are you planning to install a pool cover? Yes / No

If yes - what type? Bubble-Solar / Thermal Blanket / Other: _____

What hours will the pool be covered? From: _____ To: _____

Type(s) of heating to be used? Solar / Gas / Heat Pump

If solar, which direction does roof face? North / South / East / West / Other: _____

Roof Area Available: Length [m] Width [m] or Area[m²]

Period of Filtration: Start Time: _____ Finish Time: _____

Fuel Costs if Known: Natural Gas cents per MJ or Tariff Structure

LPG cents per litre

Electricity cents/kWh or Tariff Structure.

AIS Albany Base Hospital Alice Springs Olympic pool Alstonville Pool Altona Inshore Pool Altona Inshore Pool Ashfield Aquatic Ashfield Aquatic Centre Ashgrove School Aspley School Qld Auburn City pool Australian Catholic University Bacchus Marsh Pool Ballan Pool Ballarat Aquatic Centre Baralaba Pool Batemans Bay Municipal Pool Batlow Swimming Pool Beach Breakers Apartments Beach House Resort Beaufort Pool Bell State school Belligen Pool Belyando Community Pool Bendigo Recreation Centre Bentleigh Bayside Pool Berridale Pool Biggenden Pool Blue Mountain Hydrotherapy Body Workshop Bond University Pool Boonah Swimming Pool Bowral Pool NSW Braken Ridge State School Bribie Island Aquatic Centre Brighton Grammar Brighton Swim School Brisbane Boys School Brisbane City Valley Pool Broadmeadows Indoor Pool Broadwater Como WA Broadwater Resort Brown Hill Pool Brunswick City Baths Bulleen Swim Centre Bundanoon Swimming Pool Buninyong Pool Ballarat Burnie Aquatic Centre Cabariah Barracks Calabah Pool Caloundra Pool Camberwell Girls Grammar Camp Hill State School Campaspe Downs Resort Candelo Pool Capella Aquatic Centre Carew's Swim Centre Carey Grammar Carlton Baths Carole Park School Casurina Recreation Centre Ceduna Aquatic Centre Centenary Heights Pool Centenary Pool Charlestown Swimming Pool Cherside Pool Christ Church Grammar School Churchill Indoor Pool Clayton Fitness Centre Clem Jones Clifton Pool SA Clifton Springs Community Pool Clovelly Park School Clunes Pool Cobden Pool Coburg Leisure Centre Coburg Technical School Coco Bay Resort Coffs Harbour Pool Coffs Harbour Pool Coober Pedy Area School Coolum Aquatic Cooper pool Coops Racquet Centre Coorparoo School Qld Corowa Golf Club Corrimal Pool Cowes Municipal Pool Cowes Primary School Crib Point Municipal Pool Crows Nest Pool - Qld Croydon Special School Dalwalinu Olympic Pool De La Salle College Midland WA Delgany Resort Pool Dept. of Defence Dimboola Memorial Pool Donald Pool Doncaster East School Pool Dorrigo Swim Centre Dubbo Pool Dunwich School Pool Eden Community Pool Eildon Pool Eltham College Eltham Swim School Emerald Pool Emerton Leisure Centre Engadine Pool Essendon Pool Eumundi Eva Bory Swim Centre Ferny Hills Pool Firbank Girls School Forbes Pool Foster pool Fremantle Crocodile Park Fryberg Pool NZ Galston Municipal Pool Garfield Olympic Pool Geelong Aquatic Centre Geelong Grammar School Genazzano College Gilgandra Pool Glenbrook Pool Glendhy School Goulbourn Olympic Pool Granville Griffith Indoor Heated pool Guardian Angels Pool Gullivers Swim and Gym Hagley School Harold Holt Pool Harold Holt Swim Centre Hawthorn Aquatic Centre Headland Gardens Healesville High School Health Land Pool Heidelberg Olympic Leisure Hendon School Heritage Golf Club Hervey Bay High School Heywood Pool Hibiscus Retirement Village Hilton Hotel Melbourne HMAS Albertross HMAS Cerberus Holsworthy Base Pool Hornsby Municipal Pool Ingle Wood Input Swim Centre Ipswich Girls Grammar Ithaca Creek State School Qld Iwazaki - Capricorn Resort Joondalup Swimming Pool Jubilee Park Aquatic Centre Just Swim Juvenile Justice Centre Kardinia Aquatic Centre Katoomba Kawana Kedron Pool Kempsey Pool Kevin Duff School of Swimming Kew Leisure Centre Kilcoy Pool Kilmore Municipal Pool Kingaroy School Qld Kings Aquatic Centre Kingscliff Pool Kitcheners Aquatic Centre Kolan Community Pool Kooweerup Swimming Pool Korowa Girls Grammar School Korumburra Olympic Pool Kowree Sports Centre Lake Bolac Complex Lambton Swimming Complex Lara Pool Launceston Pool Leeming Aquatic Centre WA Leichardt Pool Leongatha Municipal pool Lido Olympic Pool NZ Lismore City Council Lithgow Olympic Pool Long Tan Pool Qld Lower Plenty Sports Center Macquarie Olympic Pool Canberra Manly Pool Marshall Road State School Melbourne City Baths Melbourne Grammar Indoor Pool Melbourne Sports and Aquatic Menai Mentone Girls Grammar School Merrigum Swimming Pool Michael Wendon Pool Milton State School Mitcham Girls High School Monash University Pool Moreland City Pool Morisset Mornington High School Mt Beauty Pool Mt Gravatt State School Mt Tamborine Pool Mt. Beauty Swimming Pool Murray Bridge Murrumbena School Pool Nambucca Heads I.C.A. Pool National Institute of Sports AIS-ACT Nebo Lodge Pool NSW Neerim South Municipal Pool New Norfolk Pool Newcastle University Next Generation Clubs Australia Noble Park Pool Nolans Swim School North Ryde Pool Norman Park State School North Melbourne Pool Northcote Pool Northern Swimming Centre Northwind Apartments Nunawading Fitness & Aquatic Nundah State School

SUNBATHER COMMERCIAL TENDER & WARRANTY DOCUMENTS

Nyah and District Community Pool Oakley Barracks Oberon Omapere Hotel - NZ Osborne Park Swimming Pool Pakenham Olympic Pool Park Royal Hotel parkes Council Pool Parkridge State School Pascoe Vale Community Pool Paul Saddler - Bacchus Marsh Paul Saddler Ballarat Paul Saddler Carrum Downs Paul Saddler Hoppers Crossing Paul Sadler Swim School Penfold Sheldon College Peninsula School Peninsula Swimming & Aquatic Penrith Swimming Centre Pines Forest Municipal Pool Pioneer Valley Hospital Port Augusta Port Lincoln Leisure Centre Prahran Pool Prairewood Presbyterian Ladies College WA Prosperpine Shire Council Quality Inn Hotel - NZ Queensland University Pool R.E. Aquatics RAAF Laverton RAAF Sale Ravensthorpe School Pool WA Rawson Pool Complex Raymond West Pool - Shepparton Redcliffe/Lawnton Pool River Gum Primary School River Resort - Mandurah WA Riverside Pool Roxby Downs Pool Runcorn School Qld Ruth Everuss Aquatics Ryde Pool Sale RAAF Base Pool Samford Pool Sanctuary Cove Sandcastles Holiday Apartments Sawtell Scarborough Sharks Scotch College Scots College Aquatic Centre Seven Oaks Pool Shawns Swim School Shellharbour Simpson Barracks Singleton Pool Skippers Cove nowtown Area School Somerset Hills School Somerville House Sport Complex Southern Pool Camberwell Southport Pool Splashes Springwood High School Pool St Albans Pool St Bernards Essendon St Itas School St Josephs Nudgee College St Kierans School St Leonards College St Mary's Pool St Michael's Grammar St Peter's College St Peter's Lutheran College St. Hildas College St. Josephs Nudgee St. Kierans School Stamford Heights State School Star Fitness Strathalbyn Pool Strathcona Baptist Girls Grammar Sundale Garden Village Swifts Creek Pool Sylvanvale Syndal Swim School Takapuna Olympic Pool - NZ Tatura Pool Taylors Range Country Club Tenterfield Olympic Pool Terry Hills Swim School Thornlands State School Pool Thredbo Timboon Pool Toogoolawah Shire Pool Toora Pool Toora Swimming Pool Toorak College Toowoomba Pool Trinity Grammar Tumbarumba Swimming Pool Unanderra Pool UNIS Hanoi Valley Pool Qld VCAH Glenormiston Victoria Park Pool Victorian Police Academy Pool Villa Maria Hydrotherapy Vision Australia Wagga Recreation Centre Wandon Pool Wangaratta Warakurna Olympic Pool - NZ Warringah Leisure Centre Waterworld Waverly Pool Weller's Hill State School Wentworth House Werribee Pool West Australian Newspaper Office Wet'n'Wild Qld Whinchelsea Pool Whitecaps Apartments Whittlesea Pool Whinchelsea Swimming Pool Windsor Windward Apartments Winton Pool Wirrina Resort Wishart State School Wodonga Sports & Leisure Centre Wondai Shire Pool Woodford Pool Woodville School SA Woogaroo Swimming Club Woolgoolga Pool Yallambie Holiday Apartments Yallourn North Pool Yarra Junction Yarrowonga Yarrunga Pool Yea Yeronga Pool Moonie State School Kempsey Aquatic Centre Yeronga Pool Saint Idias State School Moreton Bay Girls College Bumdamba - Ipswich City Council Russell Island Appolo Bay P-12 College Crescent Lagoon State School Mckeon Swim School Kilcoy Pool Julia Creek Pool Moruya Pool Batemans Bay Pool Tallebudgera Pool Aquarena Aquatic and Leisure Harold Holt Swim Centre Werribee Olympic Outdoor Pool Virgin Active - Melbourne Blue Dolphin Swim School Adelaide Taylor Range Country Club Smithton Pool Tasmania Caulfield Hospital Kilsyth Memorial Pool McLarenvale Fitness Centre Batemans Bay Municipal Pool Hamilton Pool Uralla Pools Novatel Barossa Valley McKeon Swim School Silverwater Resort Vickies Swim Centre Kensington Recreation Centre Mayfield Swimming Pool Gilgandra Shire Council Mortlake Swimming Pool Marysville Swimming Pool Alice Springs Swimming Pool Ripples St Marys Belgrave Swimming Pool Sunshine Leisure Centre Northern Stars Swim Centre Oasis Club Sutherland Leisure Centre Brisbane Girls School Nagambie Pool Avenel Pool Dalby Pool Sam Reilly Swim School South Coast Aquatics Sunshine Leisure Centre PCYC Association Colmslie Outdoor Pool St John of God Hospital Parafield Gardens Wallsend Big4 Bellarine Holiday Park Oasis Club Clifton Crows Nest Cecil Plains Boorowa Council Oakey Mount St Michaels Terry Hills Hornsby Aquatic Centre CFIE Millmerran Dunolly Pool Evans Head Aquatic Centre Eildon Pool Maryborough Indoor Pool Milne Bay Pool Burnie City Council Lambton Leeton Gloucester Olympic Pool Strathcona School West Wyalong Geebung Special School Coffs Harbour Pool Port Macquarie Pool Emmaville Virgin Active Pitt Street Warrnambool College Royal Sydney Golf Club Southern Cross Catholic College Camden Burnside Heights Kokoda Memorial Pool Huntingtower School Mt Evelyn Special School Dandenong Valley Special School Moreton Bay School Golden Sands Apartments and hundreds more

Solar Collector Panel (Sunbather HIPEC).

Solar Collector Panel will be HIPEC or Commercial Grade if specified, extruded elastomeric material formulated to have long life (15 Year Warranty) when subject to weathering in the Australian sun. Solar collector arrays will be configured to take best advantage of available roof areas but with hydraulic design as the first priority. Solar collector webbing will be punched nominally every 25mm with 5mm diameter drainage holes. This improves drainage, reduction of roof moisture, and improved glue bond to roof material. Solar collector will be batch stamped with manufacturer and date of production every 2 lineal metres of extrusion. Solar collector will be manufactured from materials in accordance with AS2369.2-1993 Materials for Solar Collectors for Swimming Pool Heating.

Sunbather material will be affixed to the roof using appropriate adhesive applied at intervals of up to 600mm. On metal deck roofs (including corrugated iron) the strips will be run transverse to the roof ribs to eliminate any possibility of water entrapment beneath them. Where space permits strips may be spaced apart to improve solar collector output by gaining an effective roof contribution. Attachment of the individual solar collector tubes into the hydraulic circuit/manifolds will be by internal compression connection, unique to Sunbather. (see illustration on page opposite). No synthetic rubber components, including grommets, will be allowed in contact with pool water. Some rubber products will break down over time and perish when in contact with pool water chemicals.

Pipework:

All pipework will be class 9 PVC pressure pipe for diameters up to 80mm and class 6 or 9 for diameters equal to or greater than 100mm. Pipe will be solvent welded joint (SWJ) using approved solvents. Adequate support will be given to all pipework to positively locate it, at the same time allowing for movement due to thermal expansion. Thermal expansion movement will be taken up using offsets in the pipe layout. Pipe anchors will be used where no movement is to be allowed. Solar collector manifold must be sized to provide an even distribution of water flow through the entire solar collector.

Pump:

A solar circulation pump will be used to provide water circulation through the solar collector. This will take water from the pool filtrate line or sump, pass it through the solar collector and thence back into the filtrate line or sump. Pump construction will be:

- Stainless steel shaft & Impeller
- Mechanical seal
- Back pull- out design
- TEFC motor
- Cast iron pump casing, option of epoxy coated.

Pump duty will be based on a flow-rate of 0.035 litres/m²/s applied to the solar collector area or that which is specified. For all other pump details refer to manufacturer's specifications.

Pipe Size MM	Mean OD MM	Mean Bore Di MM	Mean Wall MM	Mass Kg/6m Length
40	48.25	42.8	2.73	3.4
50	60.35	53.7	3.33	5.3
65	75.35	67.0	4.18	8.2
80	88.90	79.0	4.95	11.5
100	114.30	101.7	6.30	20.0

Isolating, Balancing & Check Valves:

Isolating Valves: These will be lever-operated butterfly valves incorporating stainless steel disc or equivalent and EPT liner or PVC ball valves of appropriate size.
Balancing Valves: As for isolating valves. System balancing will be accomplished with an ultrasonic flow meter.
Check Valves: Wafer type with cast iron body and stainless steel flaps or PVC body with internal PVC ball of required size.

Automatic Controller – Digital Readout

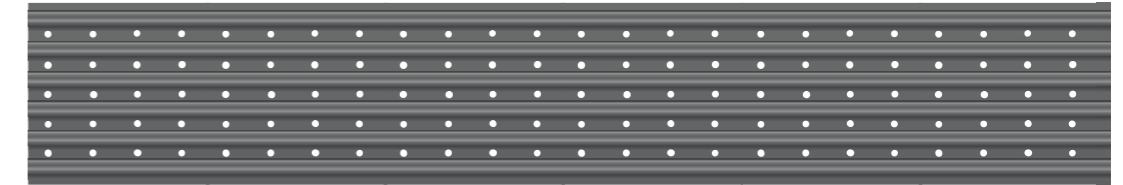
Sunbather will provide controls designed to interface with existing equipment (Gas Heating, Heat Pumps and BMS systems) to maximise running cost saving potential. Its specifications will be:

- switch on differential 7 °C
- switch off differential 2 °C
- over-temperature cut out 40 °C
- Adjustable top-out temperature.



HIPEC Solar Collector Strip.

Sample Type: Black coloured "Solar Absorber" extrudate
 Material Type: PVC HiPec "Lead Free"
 Last Reviewed: August 2011



Introduction: Solar Black is a lead free, extrusion grade flexible PVC compound. It is developed specifically for solar tubing that is used for heating swimming pools. Solar Black has been designed and externally tested to comply with the Australian Standards AS2369.2-1993 "Materials for Solar Collectors for Swimming Pool Heating – PVC". Solar Black is also available in a range of colours to match colour-bond colours and most roof tile colours. Solar Black contains no Lead, Cadmium, Barium or Tin (this applied to all colours available).

Properties: Hardness: 78A ASTM D2240 (10 second delay)
 Specific Gravity: 1.24± 0.02
 Tensile Strength: 16.8 Mpa ASTM D412
 Elongation at Break: 260% ASTM D412
 Dry Weight: 2.87 kg/sqm

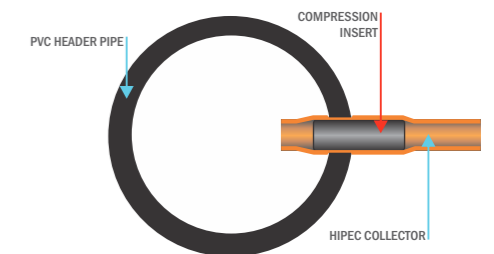
Test Requirement: Accelerated Weathering Test (as per AS2369.2-1993-Materials for solar collector for swimming pool heating.)
Test Equipment: QUV Accelerated Weathering Tester
Test Method: ASTM G154 (supersedes G53)
Test Duration: 10,000 hours
Test Conditions: Cycles of 4 hours @ 60 °C with UVB 313 type lamps and 4 hours @ 50 °C with 100% humidity

Observations: Before Test – Satin finish material with consistent colour and surface finish. Sample is flexible and exhibits good "memory"
 After Test – No change in surface finish or colour. No significant difference in flexibility and memory is retained

Conclusion: The sample of Black coloured "solar absorber" extrudate showed no observable difference in colour and no observable difference in surface finish and physical properties between exposed and unexposed samples. From this observation the sample would be good for outdoor use, involving constant and direct exposure to sunlight and precipitations.

Processing: The recommended processing temperatures for Solar Black are between 150 °C to 170 °C depending on the condition of the processing equipment.

NOTE: Recommended fixing method is pressing base of extrusion into beads of high viscose silicone, spaced at approximately 600mm centres.



Sunbather's unique **Compression Manifold Connection** is quick and easy to install or repair. Pressure tested to eliminate leaks and covered by Sunbather's 15-Year Customer Protection Plan.

Suntube Solar Collector Panel.

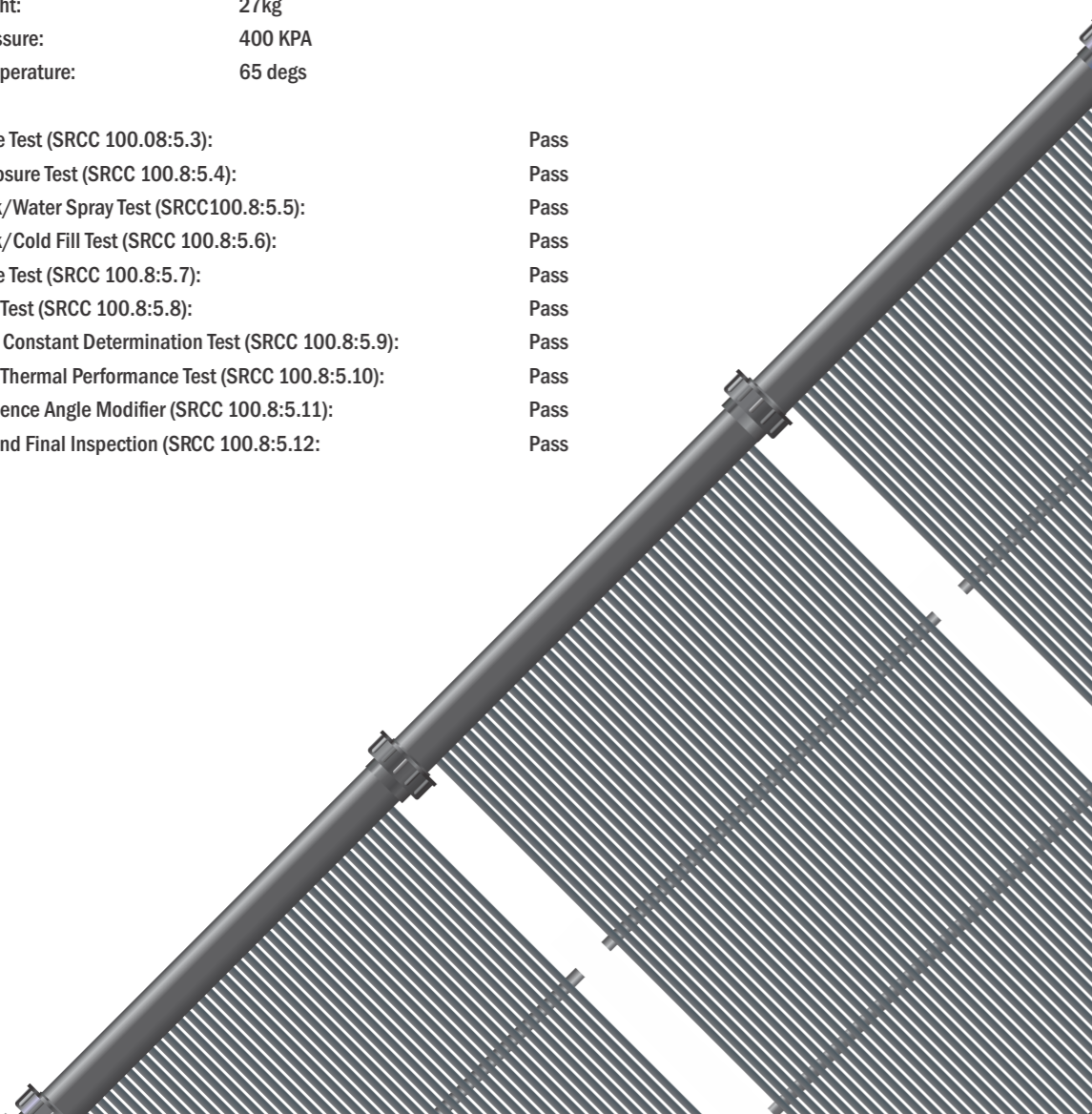
Introduction: Australian National Testing Laboratories Pty Ltd were commissioned to carry out testing on Suntube Panel as specified in SRCC Standard 100.

Company Name: Sunbather Pool Technologies
 Collector Model Number: Sunbather 'Suntube' Panel
 Type: Unglazed round tube
 Cover Material: Polypropylene UV Stabilized
 System Model number tested: 8641700

Collector Measurements:	Height-mm	Width-mm	Area M2
Gross	2900	1820	5.28
Aperture	2750	1590	4.28
Absorber	2750	1218	3.35

Number of tubes or channels: 62 x 3 Collectors used for testing
 Tube Diameter: 6mm
 Tube pitch: 8mm
 Collector Weight: 27kg
 Maximum Pressure: 400 KPA
 Maximum Temperature: 65 degs

Static Pressure Test (SRCC 100.08:5.3):	Pass
Thirty Day Exposure Test (SRCC 100.8:5.4):	Pass
Thermal Shock/Water Spray Test (SRCC100.8:5.5):	Pass
Thermal Shock/Cold Fill Test (SRCC 100.8:5.6):	Pass
Static Pressure Test (SRCC 100.8:5.7):	Pass
Pressure Drop Test (SRCC 100.8:5.8):	Pass
Collector Time Constant Determination Test (SRCC 100.8:5.9):	Pass
Post Exposure Thermal Performance Test (SRCC 100.8:5.10):	Pass
Collector Incidence Angle Modifier (SRCC 100.8:5.11):	Pass
Disassembly and Final Inspection (SRCC 100.8:5.12):	Pass



Solar Warranty - Effective 1st September 2009

We the manufacturer and supplier warrant that the Sunbather HiPEC solar collector extrusion is guaranteed to continue performing the function for which it was designed; limited to heating swimming pool water. No other function or purpose applies.

Sunbather offers this warranty to rectify, free of material charges any defects caused solely by faulty workmanship, manufacturing or materials only, as long as the product is subjected to normal use and service.

Subject to Sunbather's Terms and Conditions of Trade, and exclusions mentioned below, the solar pool heating system has the following component warranties.

- Black HiPEC & Suntube Solar Extrusion: Warranted for 10 years, plus 5 years of pro-rata warranty reducing at 50% of residual value annually until expiration of the full 15 year period.
- Colour HiPEC Solar Extrusion: Warranted for a period of 7 years.
- Solar Pump: Sunbather pass on the pump manufacturer's warranty. Refer to your pump manufacturer.
- All Sunbather Controllers: 2 year replacement warranty. 1 year (12 months) on sensors.
- All PVC pipe & fittings, and all other related components and accessories: 1 Year (12 months).
- Installation: 1 Year (12 months).

Exclusions to this warranty:

1. Damage or failure of equipment caused directly or indirectly by any work done on the system by a person not authorised by Sunbather.
2. Damage to metal roofs or gutters or drinking water storages caused by water leakage from the solar system, or for any other consequential damage caused by chemically treated water flowing through or from the solar system, or from rainwater ingress caused by blocked gutters or obstructed watercourses. It is the owner /purchasers responsibility to keep the roof & waterways clear of debris which may cause the restriction of the natural water flow.
3. Incidental or consequential loss.
4. Colour variations or fading of solar extrusions [except black] over time.
5. Damage caused by bird, rodent, or vermin life unless otherwise stated.
6. The condition of existing equipment that may affect the correct operation of the solar pool heating system.
7. Labour or travel costs incurred after the first 12 month warranty period.
8. Damage or failure due to conditions beyond the reasonable control of Sunbather. Acts of God or extreme weather conditions.

General Conditions:

- This warranty period applies strictly from date of invoice.
- This warranty is not transferrable.
- It is a condition of this warranty that the solar system be inspected annually and any faults reported within 14 days from inspection date to Sunbather.
- All Sunbather solar systems must be installed in strict accordance to the installation manual. Any variations of installation works to the manual will void warranty.
- It is highly recommended that an authorised Sunbather service-person inspect annually to ensure maximum operation efficiency.

Additional Bird and Rodent Protection Plan:

In the highly unlikely event of damage by cockatoos or rodents to your Sunbather Solar Collector, the original purchaser of the system will be covered for the following:

12 Month Full Cover following original installation of the solar system: During this period if any collector is damaged by birds or rodents, the affected collector area will be repaired or replaced at no cost to the owner. Labour, freight and travel costs are applicable and will be charged to the customer.

5 Year Extended Cover following the first 12 months full cover: If any area of solar collector is damaged by cockatoos or rodents, the affected area will be repaired or replaced at one half of the then retail price. Labour, freight and travel costs are applicable and will be charged to the customer.

Blanket Material

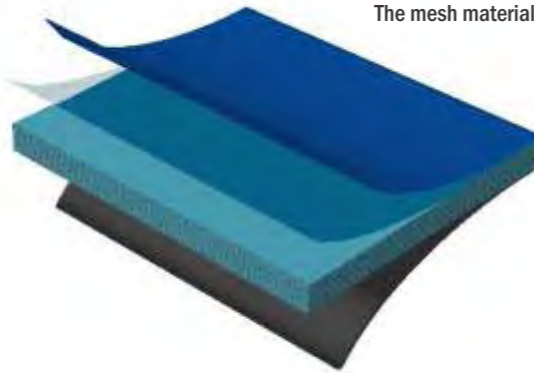
Blankets shall be fabricated from UV stabilised closed cell cross-linked polyethylene foam laminated between a UV stabilised woven polyethylene fabric top and bottom.

Lamination shall be accomplished by flame bonding between the layers.

Material shall be manufactured to quality management standard AS-NZS-ISO. 9002

Nominal thickness shall be 3mm.

Thermal conductivity shall be nominally 0.035W/mK.



Wind Retention (Outdoor Pools).

Each blanket shall have fitted along all longitudinal edges effective means of prevention for blanket dislodgment from the pool water surface.

Weighted flexible rope of no less than 20 grams per metre contained within a mesh material, which is double stitched to the blanket edge, will be the minimum acceptable requirement.

The mesh material must have specific gravity greater than 1.0.

Blanket Edge Protection (Indoor Pools):

Each blanket shall have woven protective mesh double stitched along its entire longitudinal edges to protect against wear and abrasion.

Woven mesh shall be a minimum width of 25mm on both top and bottom of blanket edge.

Haul Cords:

Each blanket system shall be supplied with a haul cord of adequate length to enable the user to attach it to the blanket a walk with it to the opposite end of the pool.

One end shall have a non-corroding spring clip for connection to the central pull ring. Haul cords will be black and float in water.

End Detail:

- Both leading and trailing edges of the blanket shall be multi-layered and reinforced with double stitching.
- The leading edge of each blanket shall incorporate a substantial stainless steel central pull eyelet for haul cord attachment.
- The trailing edge of the blanket shall be connected to its storage roller by attachments at intervals no greater than 600mm.

- Attachment cords shall be detachable from the roller tube and be of a material suitable for the application.
- All attachment cords and ropes shall be terminated in an effective manner by swaging with non Corroding materials or termination with a suitable knot.

Motorisation of Mobile Storage Rollers (Super Slave):

A portable machine incorporating drum winch and drive shaft to couple with roller shafts will be used to motorise Sunbather floor-standing, wall-mounted or under-seat 200S rollers.

Unit will be 24 volt and supplied with automatic battery charger.

This machine is designed for one person operation and will be constructed of corrosion resistant materials including polished 304 grade stainless steel and anodised aluminium.



PLEASE NOTE: Thermal Covers are not safety covers and are not designed to support the weight of humans or animals. Do not attempt to walk on or swim under the cover. Remove the cover completely before entering the pool.

TECHNICAL DATA: .

MATERIAL PROPERTIES:

Thickness	3mm or 5mm
Width	2000 mm
Foam Colour	Colour range available on request
Film Filament Count	3.9 x 3.9 per cm
Film Colour	Colour range available on request
Temperature Range	-40°C - 70°C

PERFORMANCE PROPERTIES:

Tensile Strength - AS 2001.2.3		
[3mm]	2790 N MD	2339 N CD
[5mm]	2465 N MD	2070 N CD
Elongation At Break - AS 2001.2.3		
[3mm]	19.2% MD	17.5% CD
[5mm]	16.2% MD	15.7% CD

Tear Strength - AS 2001.2.10

[3mm]	490 N MD	406 N CD
[5mm]	341 N MD	279 N CD

Water Absorption

[3mm]	3.8 x 10 ⁻⁴ g/cm ²
[5mm]	2.5 x 10 ⁻⁴ g/cm ²

JIS K6767 Thermal Resistance (R-Value) - AS 4859.1

[3mm]	0.10 m ² K/W
[5mm]	0.15 m ² K/W

UV Resistance - AS 2001.4.21 No reduction in tensile strength

Buoyancy - AS 2001.2.17 >250 kPa

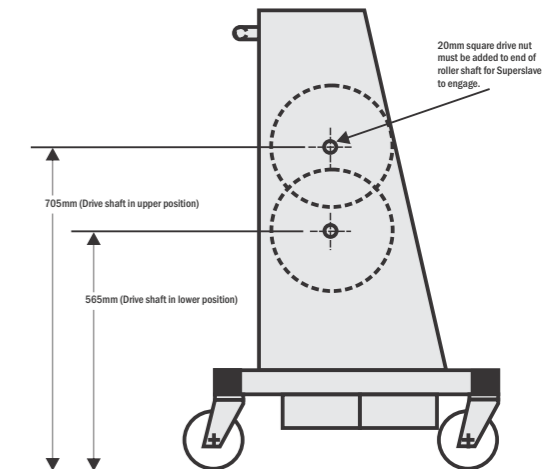
Chemical Resistance Excellent

Flex Resistance Good

Dry Delamination Resistance - AS 4201.1 Pass

Water Vapour Transmission Rate - ASTM E96 99.9% Reduction

SuperSlave Mark 4 - General Layout:



SuperSlave Underseat System:



UNDERSEAT ROLLER DRIVEN BY SUPERSLAVE.

[a] Hand Operated Mobile Storage Rollers

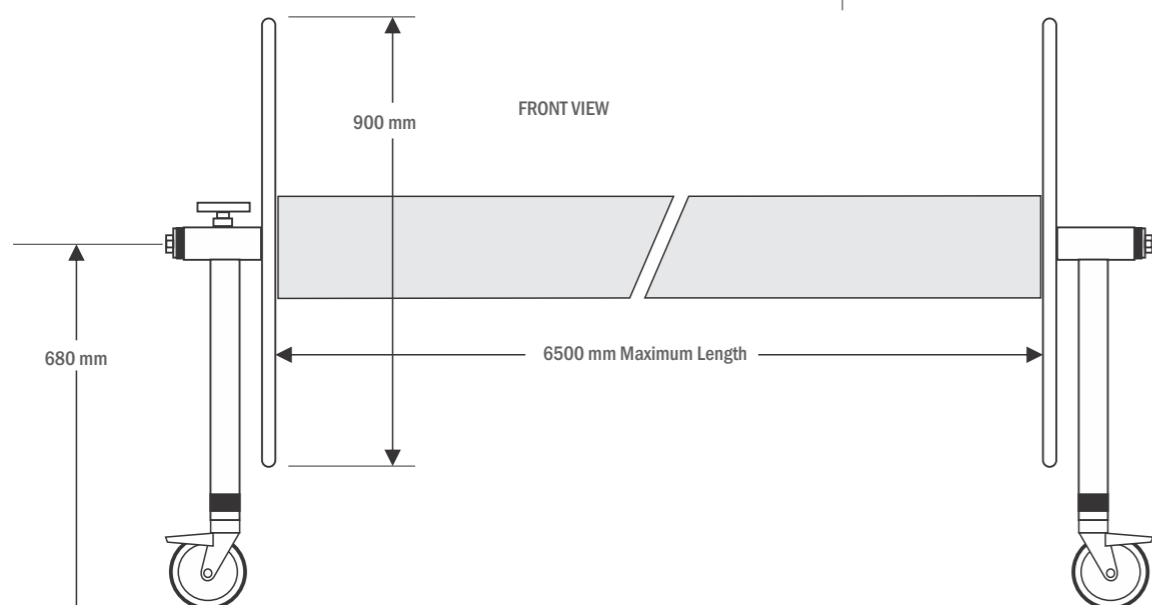
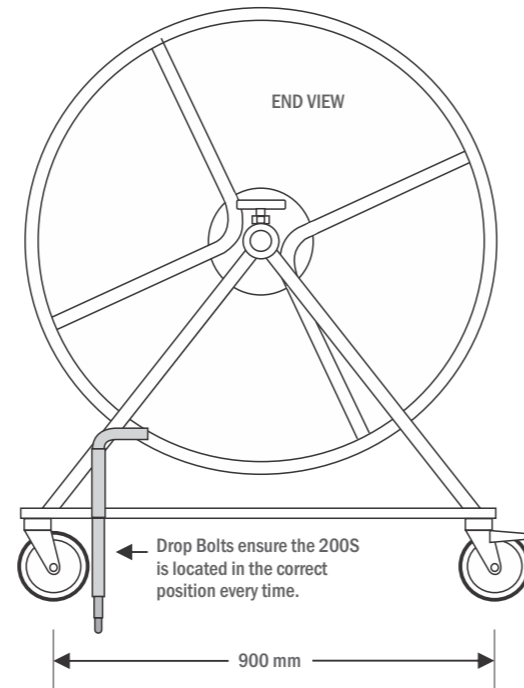
Rollers shall consist of a roller of sufficiently large diameter to enable the cover to be wound on with no creasing. This roller will rotate on shafts running in bearings connected to fully welded end Carriages. For covers over 25m in length the rollers will be driven by handwheels. Covers 25m and under may be driven by crankhandles. Handwheels, crankhandles, bearing housings and end carriages shall be chemically electropolished 304-grade stainless steel. Electropolishing shall be by process compliant with ASTM 380 Bearings shall be low friction and easily replaceable.

Rollers shall be of a diameter which when fully loaded with wet blankets will not deflect more than 1/300 of their span. Anodising shall be to AS 1231-1985 and to a depth of 15 micron. Rollers shall be fixed to their shafts in such a way as to distribute load stresses away from the very end of the tube and so as to minimise eccentricity of roller with respect to shaft. Polyurethane, or similar bumper pads shall be fitted to the end carriages to prevent damage to and from collision with pool copings during deployment or retrieval operations.

[b] Roller Wheels & Braking Systems:

Roller wheels shall be nylon with stainless steel swivel castors. Swivel and wheel brakes will be used where the roller bears against a pool coping during its use. Where no pool coping exists rollers must be located in position using drop bolts.

Drop bolts: a robust stainless steel rod engaging into a stainless sleeve recessed into the floor surface and then retracted when not in use. This ensures exact positive roller positioning every time. End of the roller with polyurethane or similar bumper pad to avoid damage to floors.



Wall-Mounted Hand Operated Rollers:

Specification to be broadly the same as in [a] & [b]. End frames shall be of anodised aluminium as in 6.2 and designed so as to adequately support the pool blanket and roller mechanism.

End frames may also need to be designed to fix appropriately to the pool building structure. Bearings shall be of stainless steel and self-aligning.

Wall-Mounted Motorised Operated Rollers:

Specification to be broadly the same as in [a] & [b]. Bearings shall be of stainless steel and self-aligning. Adequately support the pool blanket and roller mechanism. End frames may also need to be designed to fix appropriately to the pool building structure. Blanket roller shall be generally of anodised aluminium and clear-span for the width of each pool cover with an allowance for cover "run-out". Rollers shall not deflect more than 1/300 of their span when fully loaded with wet blankets.

Motor to drive the roller shall be 240V TEFC or 24v to suit application and painted with a suitable epoxy paint. Gearbox will be of suitable ratio so as to dispense the blanket onto the pool at an easily managed speed with respect to the operator's ability to pull it onto the water surface. Operation of the roller shall be by remote control using a hand held transmitter to provide the following functions in rotational sequence: forward, stop, reverse, by keying a button on the transmitter (remote).



Thermal Blanket WARRANTY - Effective 1st September 2009

This warranty is a 5 year month by month pro-rata warranty. Sunbather will compensate for the number of months that your pool cover does not achieve its intended purpose, if found to be defective in material or Sunbather workmanship (up to the maximum warranty period).

The customer is liable for the months the cover has been in use. This warranty is not redeemable for cash and can only be used as a discount on a replacement pool cover purchase from Sunbather. This warranty only applies to the original purchaser and is non-transferable.

In addition to any statutory rights the customer may have, we the manufacturer and supplier warrant that your Sunbather Thermal Cover is guaranteed to continue performing the function for which it was designed, for a minimum of 5 years - Providing the product has been used and maintained in accordance with the original instructions. It is a requirement that your cover is returned to your nearest Sunbather office and all freight costs are payable by the customer. If upon examination of the cover, we determine it to be defective in material or Sunbather workmanship, we will repair or if necessary, replace the cover with the following exclusions.

Exclusions to this Warranty:

1. The purchaser failing to comply with Sunbather installation instructions.
2. Normal wear and tear.
3. Any incidental or consequential losses.
4. Marginal stretch or shrinkage of the material (up to 5%).
5. Overheating the cover in temperatures greater than 40 degrees, either in storage or on the pool/spa.
6. Acts of god or extreme weather conditions. Under such circumstances we recommend that your cover is removed and safely stored.
7. The user subjecting cover(s) to stress conditions which may result in tears, undue creases, cuts or damage.
8. Mismanagement of water balance. Do not let your chemical concentration exceed normal, advised levels. Always follow instructions on chemical containers. Damage caused by incorrect water balance is not a manufacturing fault and will not unduly affect the thermal performance of the cover.
9. All other cover accessories including, but not limited to, eyelets, sewn edges, straps, cords, & wind skirts.
10. Any travel, freight and /or associated with warranty claims.

Important Notes:

- Proof of purchase must be supplied.
- This warranty applies from invoice date.
- Claims must be made to your nearest Sunbather Pty Ltd branch.
- Replacements do not come with a new warranty period.



WALL-MOUNTED MOTORISED 200S ROLLERS WITH THERMAL BLANKETS.

Note: Requests for onsite service calls will be fully chargeable if the product, fault, or damage in question is found not to be covered by warranty.

Rollers Warranty - Effective 1st September 2009

General Roller Warranty Conditions:

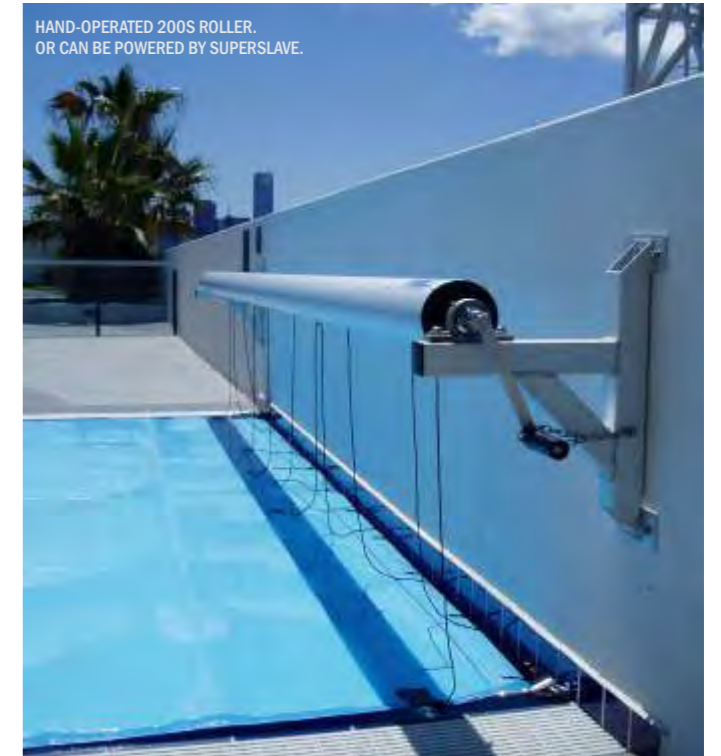
We the manufacturer and supplier warrant that the Sunbather Pool Cover Roller is guaranteed to continue performing the function for which it was designed (pool cover roller systems) for the warranty periods outlined below. No other function or purpose applies.

Sunbather offers this warranty to rectify, free of material charges, any defects caused solely by faulty workmanship, manufacturing, or materials only, as long as the product is subjected to normal use and service. This warranty period specifically applies from date of invoice.

Subject to Sunbather's Terms and Conditions of Trade, the pool cover roller system has the following generic component warranties:

- All Stainless Steel End Frames: 15 Years
- Straps & Cords: 1 Year
- Installation: 1 Year

(See below for specific product warranty and exclusions)



Roller Types:

- Motorised Rollers: Structural components/roller (5 years), Motors & electronics (1 Year).
- Multi Pro Roller Range: Endframes only (15 years); All fittings, straps and shafts (1 Year)
- Platinum Roller: Endframes (10 years); All shafts, wheels, & accessories (1 Year)
- Manual Commercial Roller Range (inc 114mm - 200mm shafts & custom made rollers): Structural components (15 years); Bearings, castor wheels & accessories (5 years)
- Stainless Steel Range: (inc 114mm - 200mm shafts & custom made rollers): Structural components (15 years); Bearings & castor wheels (5 years); All other accessories (1 Year)
- Motorised Super Slave: Structural components (15 years); Wheel castors (5 years), motors, electronics, wiring & other components (1 Year)

Exclusions to this Warranty:

1. Damage or failure of equipment caused directly or indirectly from work done on the system by a person not authorised by Sunbather.
2. Damage or failure due to conditions beyond the reasonable control of Sunbather
3. Labour or travel costs incurred after the first 12 month warranty period.
4. This warranty is not transferrable.
5. Ordinary wear and tear is not a defect in workmanship or material and is not covered under this warranty. Ordinary wear and tear is to be determined by an authorised Sunbather representative
6. Any incidental damage or consequential loss caused by faulty workmanship.
7. Damage caused by overheating above 45 degrees Celsius.
8. Damage caused by Acts of God or extreme weather conditions