

Introduction to Synthesis Advanced Polymer Fabrics



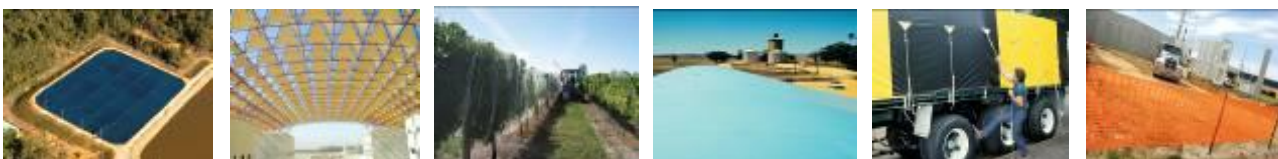
Introduction and History

- Gale Pacific invented high density polyethylene (HDPE) shade fabrics in the 1970's.
- The company is a leading global manufacturer of advanced polymer fabrics, these include
 - knitted and woven HDPE / PP / PVC outdoor fabrics, (made in our China facility)
 - Coated HDPE and PP waterproof fabrics (made in our Australian facility)
- The products are designed to:
 - Protect people and outdoor living environments from the harmful effects of UV rays, and adverse weather conditions.
 - Improve the efficiency and competitiveness of agriculture through increased crop protection, improved water conservation, and better plant yield
 - Enhance architectural designs and construction applications.
- The Company has operations in five countries, with its main factory located in Ningbo, China with specialist manufacturing in Melbourne (Australia) and California.



Introduction and History

- The Company has created a wide range of industrial products which are marketed under the **Synthesis** brand. These products are used for sun protection, construction, water storage, agriculture and horticulture.
- The Company's retail products are marketed worldwide to Home Centers under the **Coolaroo** brand. Major products include: shade fabrics, exterior window awnings, gazebos, shade sails and a range of pet products.
- Japan connection – we have been supplying Takasho for 8 years.



Gale China / (GPST – Gale Pacific Special Textiles)

- 2 facilities in China / ISO accredited / strict quality control / modern equipment
- Main factory consists of 3 buildings
- Approximately 600 employees (peak season)
- Factory built by Gale Pacific 7 years ago. Largest factory globally for shade fabric.



GPST Technology Areas

- Company manages complete manufacturing process from yarn production, through to finished knitted product and packaging.
- Custom designed German and Italian technology in yarn extrusion, knitting, warping
- PP and PVC extrusion and weaving capabilities



GPST Technology Areas



Large German knitting machines



Synthesis Products

- We create and market a large range of products from architectural shade to winery bird netting, Greenhouse membranes, to water tank liners, grain storage and coal mining ventilation.
- We will focus on the following items for Japan:
 - Synthesis Commercial 95 – architectural shade
 - Synthesis Commercial 95 WP – waterproof architectural shade
 - Synthesis SaFRshade – FR architectural shade
 - Synthesis AF230 – architectural shade
 - Synthesis Premium Hortshade – horticultural fabric for plant cultivation and asset protection(i.e cars)
 - Synthesis Landmark – waterproof membrane for protecting agricultural commodities, shading, and asset protection
 - Synthesis Solarweave – reinforced greenhouse cover material.



Notes on the Australian shade market

- Sun protection is a serious matter in Australia. People are worried about skin cancer.
- Schools, and kindergartens are big users of shade cloth. Children must be protected from Sun burn in Australia. It is the law.
- People in Australia also like to spend time with family and friends outdoors during summer. Without shade it is uncomfortable.
- Many homes use shade materials. Approx 10million sqm of knitted HDPE shade fabric is sold into the Australian market for sun protection for people. This number excludes knitted shade fabric for plants.
- It is a mature market but is not declining. Approximately 5% growth per annum.
- Markets where knitted HDPE shade fabrics are popular and common:
Australia/ Middle East/USA / South Africa / Israel
and
Japan – many knitted HDPE shade fabrics are sold in Home Centres. We sell approx 3million sqm into the market. So shade must also be important in the Japanese market.

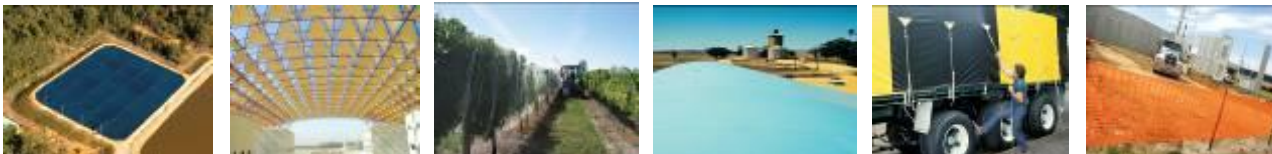


What is knitted high density polyethylene (HDPE) shade fabric?



Knitted HDPE fabric:

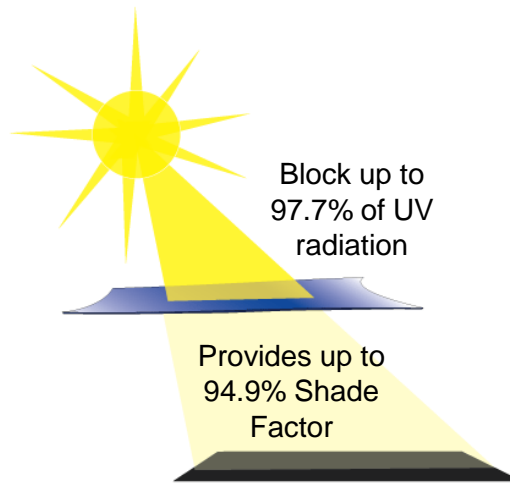
- designed for outdoor shading
- fabric breathes, creating cooler areas beneath.
- heat escapes
- very strong
- blocks UV rays
- HDPE is 100% recyclable
- Gale product is now 100% lead free.



Synthesis Commercial 95®

- **Features:**

- 340gsm, knitted HDPE
- 3mtrx40mtr
- Breathable fabric
- Strong HDPE material that can withstand high levels of tension
- High UV Block levels – 95%+
- 16 popular colours
- Sold globally
- 10yr warranty



- **Product Usage:**

- Wide variety of commercial and residential
- Small to large structures



Synthesis SaFRshade – New Fabric

- **Features:**

- 290gsm, knitted HDPE
- 3mtrx32mtr
- Breathable fabric
- Strong HDPE material that can withstand high levels of continuous tension
- High UV Block levels – 95%+
- 8 colours – Cobalt Blue/Beige/Ivory/Emerald Green/Terracotta/Nutmeg/Steel Grey/Olive
- 10yr warranty
- FR tests passed:

Australia AS1530.2	Pass
California CSFM 1237.1 Title 19	Certified
USA ASTM E-84	Class A
USA NFPA 701	Conforms
Japan JIS L1091 :1999 Method A-1	Pass
Japan JIS L1091 : 1999 Method A-3	Pass
UK BS7837 : 1996	Complies



- **Important point** - Need to discuss JIS standard. Method A1 and A3 pass. Should be enough for your market?



Synthesis AF230

- **Features:**

- 230gsm, knitted HDPE
- Breathable material
- Strong HDPE material that can withstand high levels of continuous tension
- High UV Block levels – 95%+
- 6 colours Aquatic Blue / Desert Sand / Brunswick Green / Terracotta / Natural / Steel Grey
- Sold globally
- Lighter model of Commercial 95
- 10yr warranty



- **Product Usage:**

- Wide variety of commercial and residential
- Mainly smaller structures such as parking

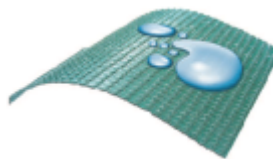


Synthesis
Advanced Polymer Fabrics

Synthesis Commercial 95® WP

- **Features:**

- 435gsm, knitted HDPE with clear PE coating on one side.
- 2.7mtr x 40mtr
- Waterproof material with good light transmission
- Strong HDPE material that can withstand high levels of continuous tension
- Excellent coating adhesion (coated in Australia)
- High UV Block levels – 95%+
- 5 popular colours - Aquatic Blue / Desert Sand / Brunswick Green / Deep Ochre / Natural
- 10 year warranty
- Seam sealant also supplied. For painting over sewn joints.



- **Product Usage:**

- Wide variety of commercial and residential



Synthesis
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Synthesis Premium Hortshade®

- Knitted HDPE (various weights based on cover factor)
- Types by Cover factor:
 - Extra Light (30%) / Light (50%) / Medium (70%) / Heavy (80%)
- Colours:
 - Green / Black / White / Beige
 - Colours and shade factors used for different plants
- Dimensions:
 - 1.83m and 3.66m / 50m rolls
- 10 Year Warranty
- Designed to protect and nurture assets (plants, people or cars)
- Gale Pacific invented this product in the 1970's.



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Synthesis Premium Hortshade - plants



Premium Hortshade – Car Parking for malls

- Southland Shopping Centre (Melbourne)
- Roof top car parking (20mtr high roof), 1km from beach, installed for 13 years.
- Cheaper alternative to Commercial 95 for cars.



Premium Hortshade – New Car Storage



Shade Structure Designs



Shade Structure Design – 3 main types



Conic



Hypar



Arch



Shade Structure Design – The Hypar



Shade Structure Design – The Hypar



Skateboard park



Shade Structure Design – The Hypar



Shade Structure Design – The Hypar



carparking



Shade Structure Design – The Hypar



Shade Structure Design – The Hypar



Garden shop



Shade Structure Design – The Hypar



School in Beijing



Shade Structure Design – Conical



Shade Structure Design – Conical



Shade Structure Design – Conical



University in the
Middle East



Synthesis
Advanced Polymer Fabrics

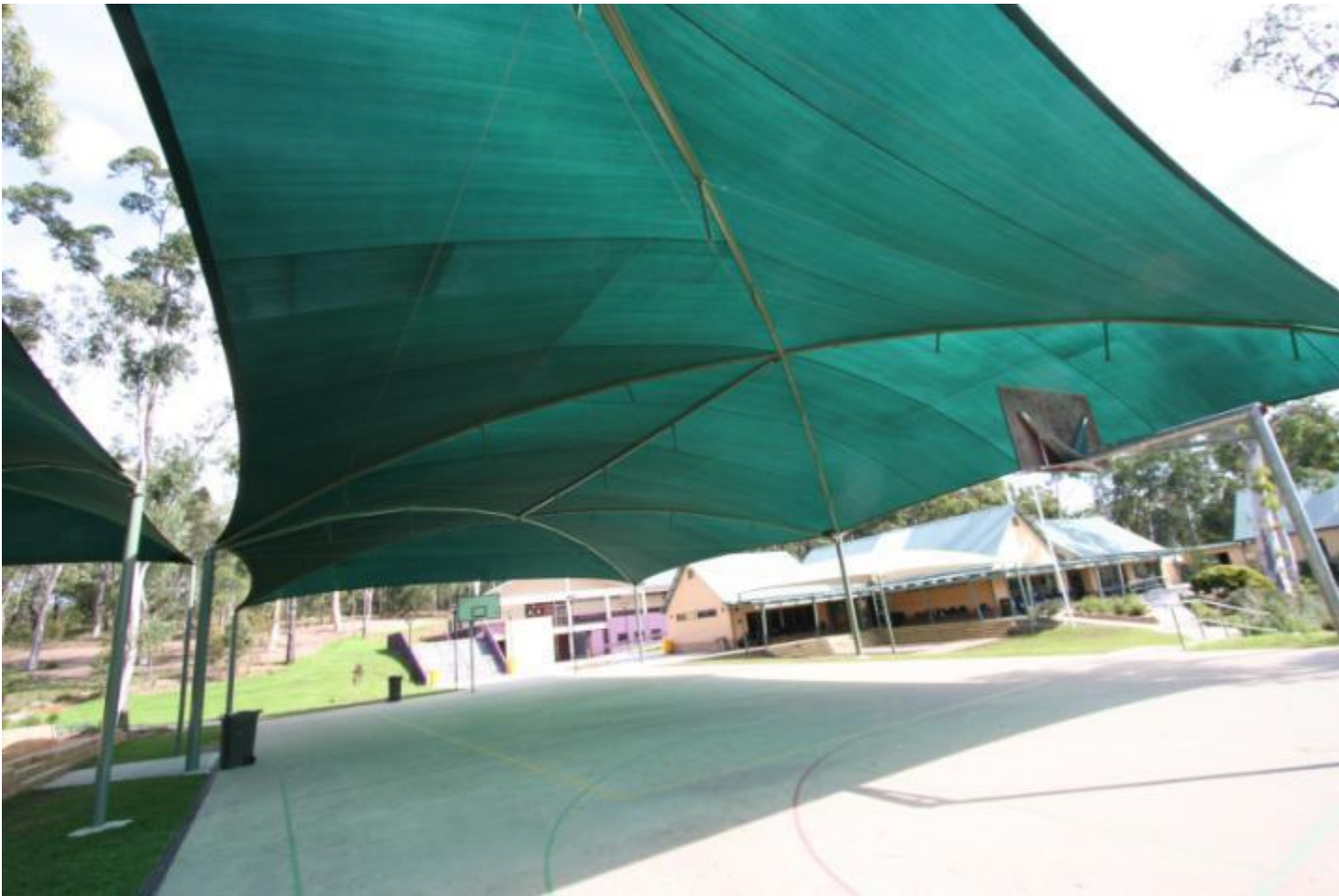
Shade Structure Design - Conical



Shade Structure Design – Arch Support



Shade Structure Design – Arch Support



School
basketball court



Shade Structure Design – Arch Support



Shade Structure Design - Decorative



Other Gale knitted Products for Horticulture



Synthesis Quad Crossover

- Knitted HDPE
- Dimensions range from 12-20mtr wide
- Horticultural net designed by Gale Pacific
- Long history of 20 years
- Used a lot of fruit orchards to maximise production and quality of fruit.
- **Designed for Crop Protection** – sun, wind, birds, heavy rainfall, hail, frost, bats, other vermin
- **Helps to manage** – water and fertiliser wastage, pests, shade, climate (temp), bee management for pollination
- **Yield** – manipulation of environment (heat/wind/moisture), reduction of losses due to above, increased pack rates, higher overall fruit quality
- Can reduce insurance premiums on properties. Adds value to property.
- Well designed structure will last 10+ years.



Synthesis Quad Crossover



Synthesis Quad Crossover



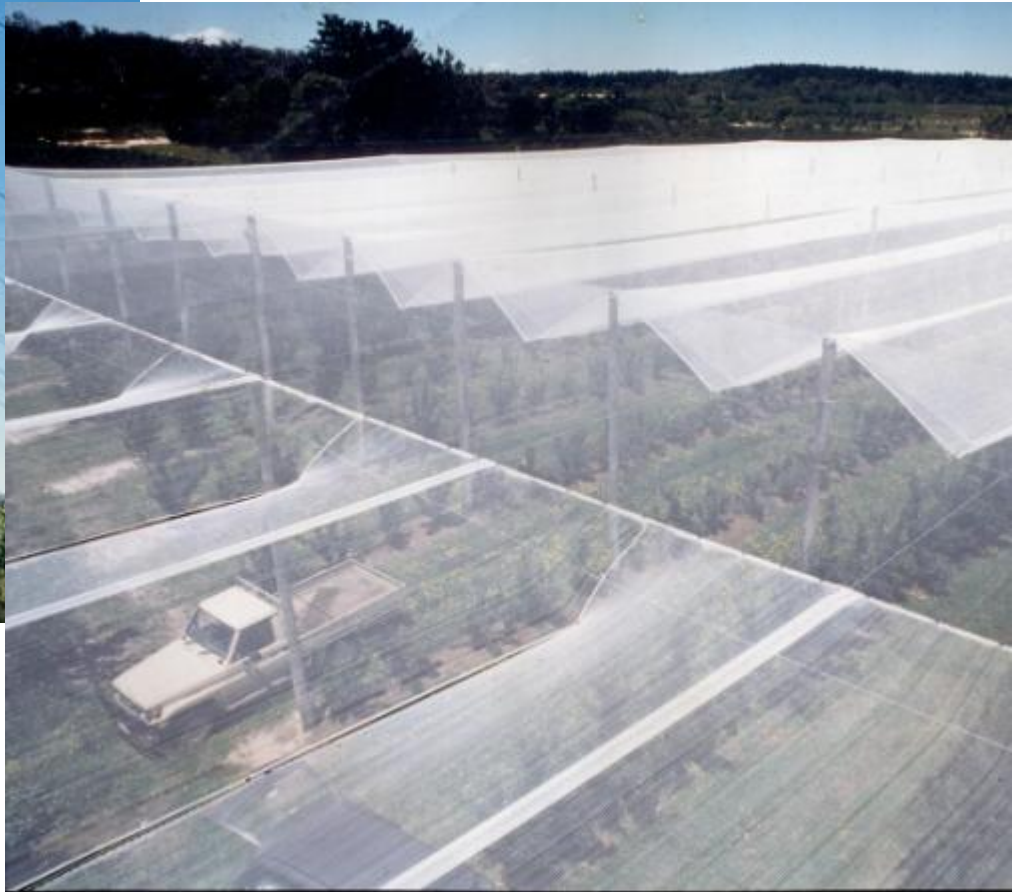
Synthesis Quad Crossover



Synthesis Vine Netting



Hail Netting



Synthesis Wind Breaks



17 year old
windbreak in Chile



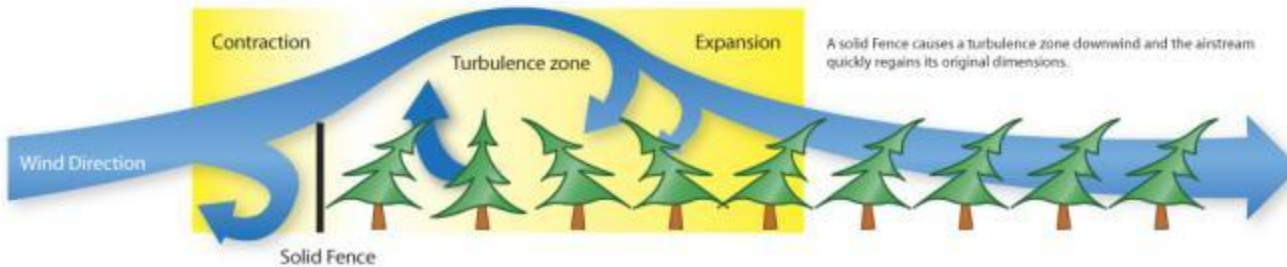
New Zealand



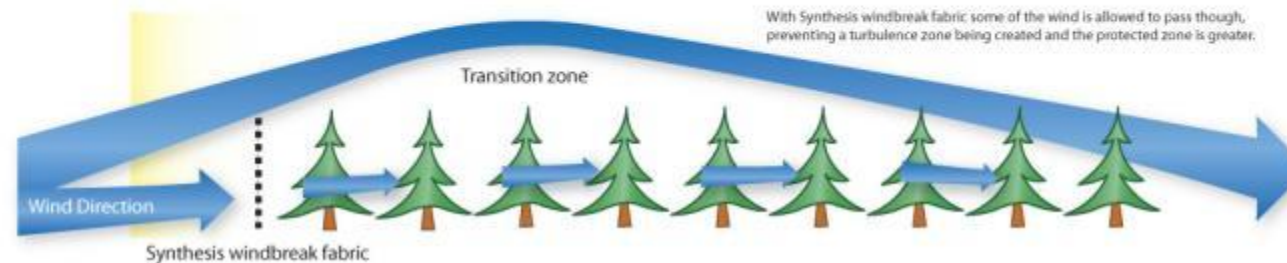
Synthesis Wind Breaks



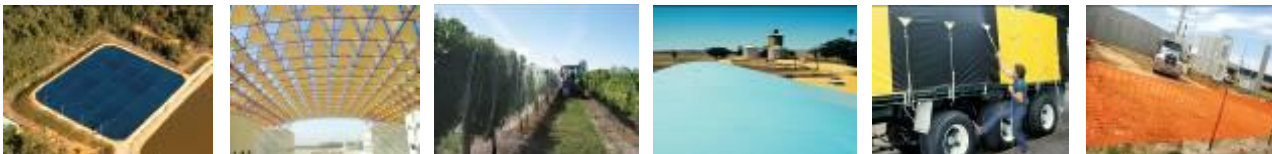
Without windbreaks fruit is damaged



With a solid fence some fruit will be damaged from wind



With a windbreak wind is managed and fruit won't be damaged from wind



Waterproof Polyfabrics made in Australia for Agriculture, Mining, and Building



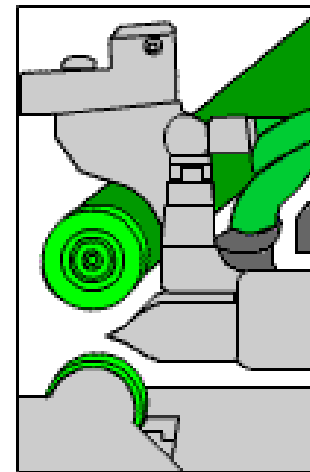
Synthesis Landmark®

- **Features:**

- 340gsm, Polypropylene membrane
- 2.05x50 (or 1000mtr)
- Waterproof
- Excellent abrasion and flex crack properties
- Strong base fabric provides excellent performance compared to heavier PVC
- Used in very harsh conditions in Australia
- Excellent welding strength (hot air or hot wedge)

- **Product Usage:**

- Agricultural storage (i.e. wheat)
- Shade structures
- Dam lining
- Long life tarpaulin applications



Hot wedge welding



Synthesis Landmark®



Grain storage tarpaulin – some are 57x300mtr



Synthesis Landmark®



Synthesis
Advanced Polymer Fabrics

Synthesis Landmark®



Synthesis Landmark®



Synthesis Landmark®



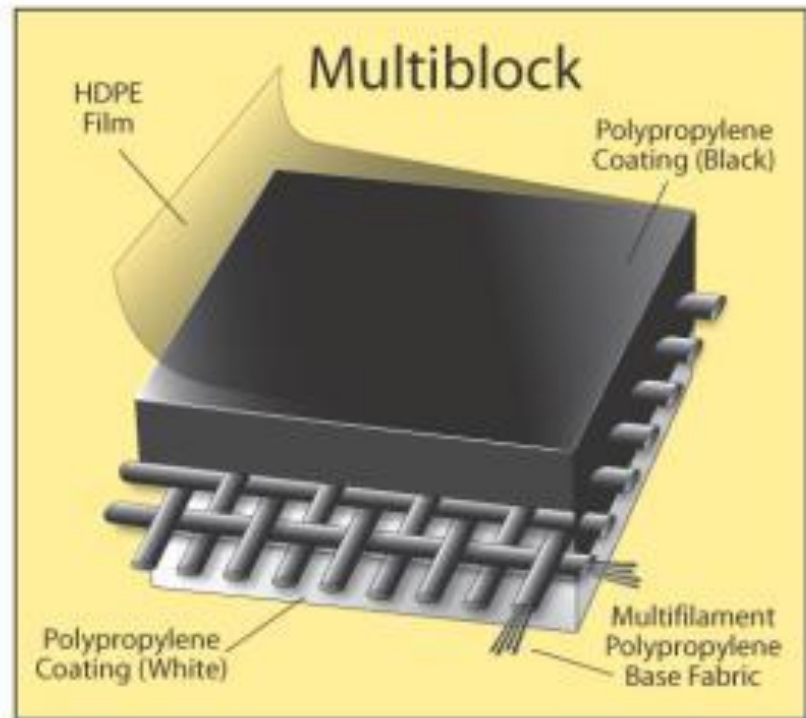
Synthesis Multiblock®

- **Features:**

- 425gsm, Polypropylene membrane
- 2.05x50mtr or 1000mtr
- Waterproof
- Excellent abrasion and flex crack properties
- Strong base fabric provides excellent performance compared to heavier PVC
- Used in very harsh conditions in Australia
- Excellent welding characteristics

- **Product Usage:**

- Designed for poultry/piggery enclosures.
- Very unique



Synthesis Multiblock®



Chicken enclosure
dark to manage egg
production



Synthesis Multiblock®



Synthesis
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Synthesis Solarweave®

- **Features:**

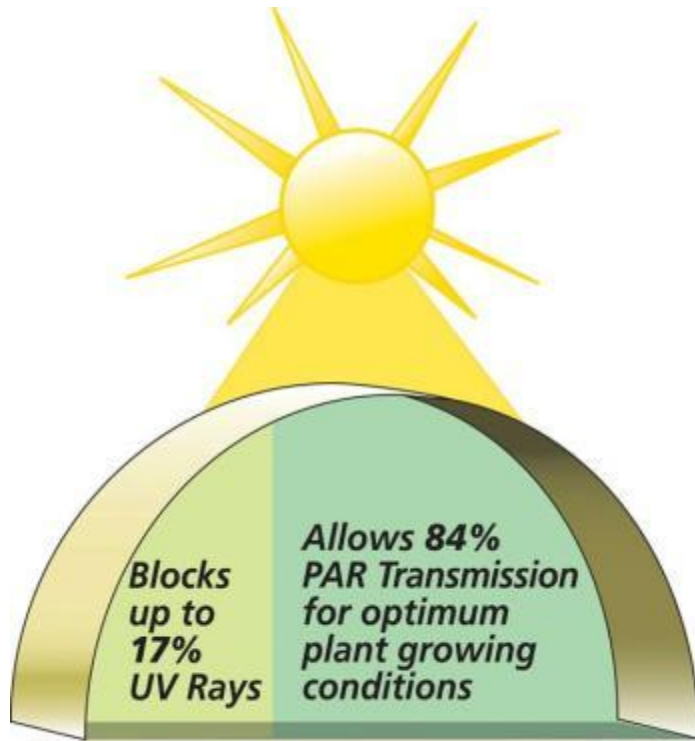
- 185gsm, PE membrane
- 2.05x50mtr or 1000mtr
- 32 year history
- Waterproof
- Two types Natural and White (for different plants)
- Strong base fabric provides excellent performance compared to heavier PVC
- Used in very harsh conditions in Australia
- Excellent welding characteristics

- **Product Usage:**

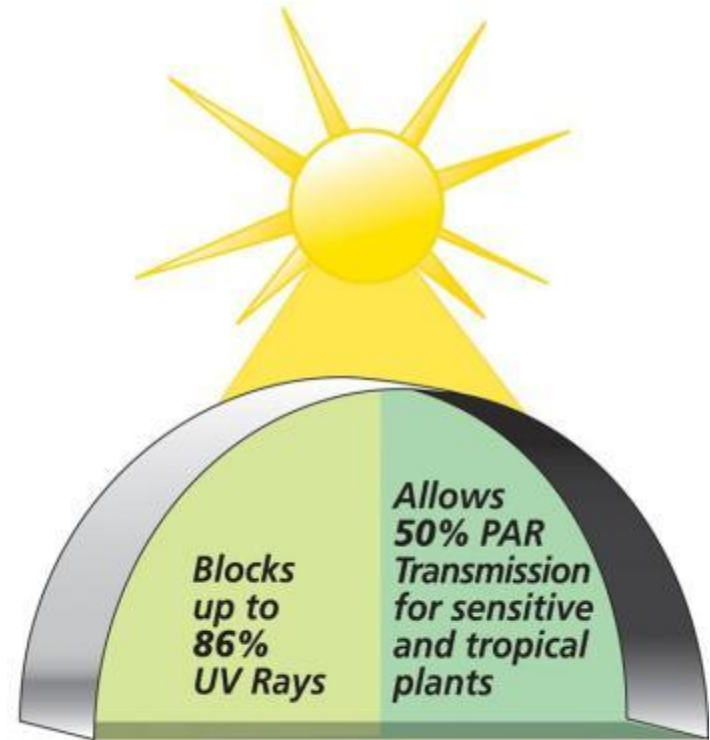
- For Greenhouse covers
- Is currently sold in Japan for hydroponic vegetable growing



Synthesis Solarweave®



SOLARWEAVE NATURAL



SOLARWEAVE WHITE



Synthesis Solarweave®



Synthesis
Advanced Polymer Fabrics

Synthesis Solarweave®



Synthesis Solarweave®



Synthesis Solarweave®



Custom products made in Australia



Flexible tubes for sugar cane in Ethiopia



Fabric to make concrete forming tubes



Water tank liners



Thank you for your attention.

