



**Australian Government**  
**Australian Radiation Protection  
and Nuclear Safety Agency**



# Ultraviolet radiation services

## Testing and services guide





# We are ARPANSA

We are the Australian Government's primary authority on radiation protection and nuclear safety. We protect the Australian people and the environment from the harmful effects of radiation through understanding risks, best practice regulation, research, policy, services, partnerships and engagement with the community.

We offer high quality services for the purpose of protection against the harmful effects of radiation. Our NATA accredited laboratory tests clothing and fabrics for protection against ultraviolet (UV) radiation from the sun. We also test sunglasses, shade cloth, window films, calibrate UV meters and assess occupational exposures in the workplace.

Our government owned service is wholly located in Australia.

We test to the following standards:

**Fabrics, garments & hats (pg. 4)**

*AS/NZS 4399: Sun protective clothing – Evaluation and classification*

**Sunglasses (pg. 8)**

*AS/NZS 1067: Eye and face protection – Sunglasses and fashion spectacles*

**Shade fabric (pg. 10)**

*AS 4174: Knitted and woven shade fabrics*

**Film, glass & materials (pg. 12)**

*UVR Protection offered by Shadecloths and Polycarbonates, Radiation Protection in Australia 1995, 13 (2) 50-54*

**UV hazard assessment (pg. 14)**

*Radiation Protection Standard - Occupational Exposure to Ultraviolet Radiation: Radiation Protection Series No. 12 (2006)*





# Fabrics, garments & hats

## Clothing to meet sun protection requirements

We test the effectiveness of clothing and hats for sun protection. We determine the ultraviolet protection factor (UPF) to make sure it meets the requirements of the Australian standard.

We test:

- workwear
- swimwear
- clothing fabrics
- rash vests
- hats
- arm sleeves
- towels
- fishing shirts
- wetsuits
- outdoor gloves
- baby wraps
- beach ponchos.

Clothing with inadequate body coverage is excluded from being labelled as sun protective, including one-piece women’s swimwear, singlets, bikinis, caps and sun visors.

What’s *new* in the standard?

There is now a **minimum level of body coverage** required for clothing to display or claim a UPF rating.



Fabric garment & hats

## Pricing

Item	Cost per item	More than 10 items
Fabrics	\$150.00	\$130.00 each
Single-colour garments	\$150.00	\$130.00 each
Multi-colour garments	\$160.00	\$140.00 each
Hats	\$160.00	\$140.00 each

All prices include GST



# Sun protection labels (swing tags)

## What is the swing tag?

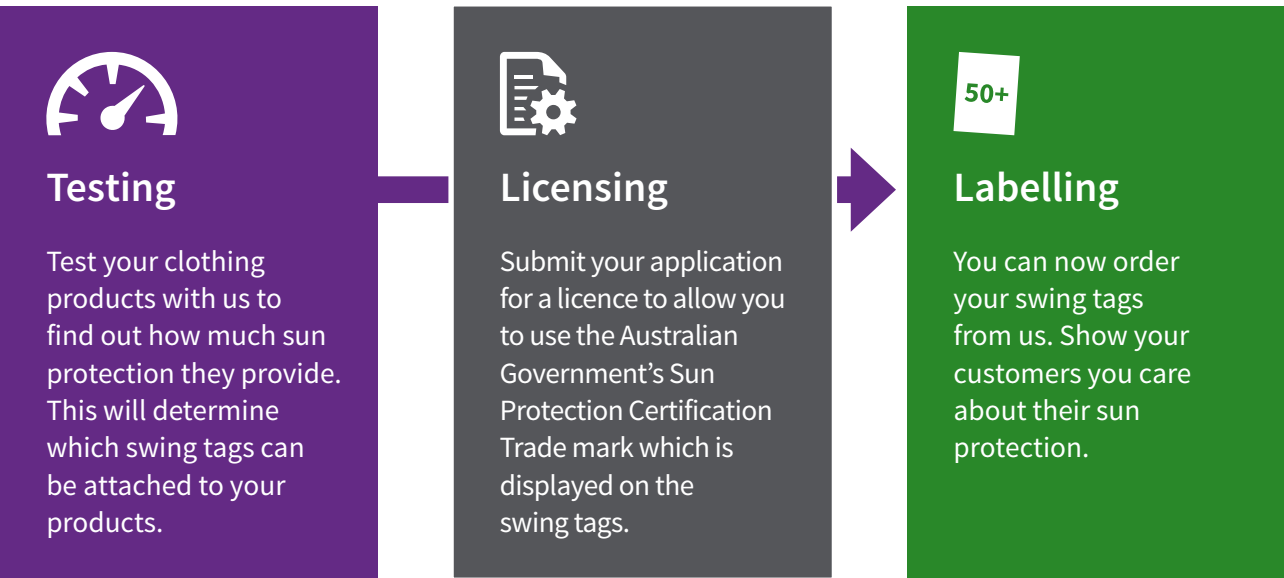
We issue swing tags for manufacturers to attach to sun protective clothing. These swing tags are trade marked and carry a UPF rating. This helps consumers identify the best sun protective clothing.

## The advantage of using our swing tag

Garments labelled with swing tags let consumers know that we have verified the sun protection rating of the products.

Consumers will have peace of mind and confidence in the sun protection provided by garments displaying our swing tag.

## How can you use our swing tag?



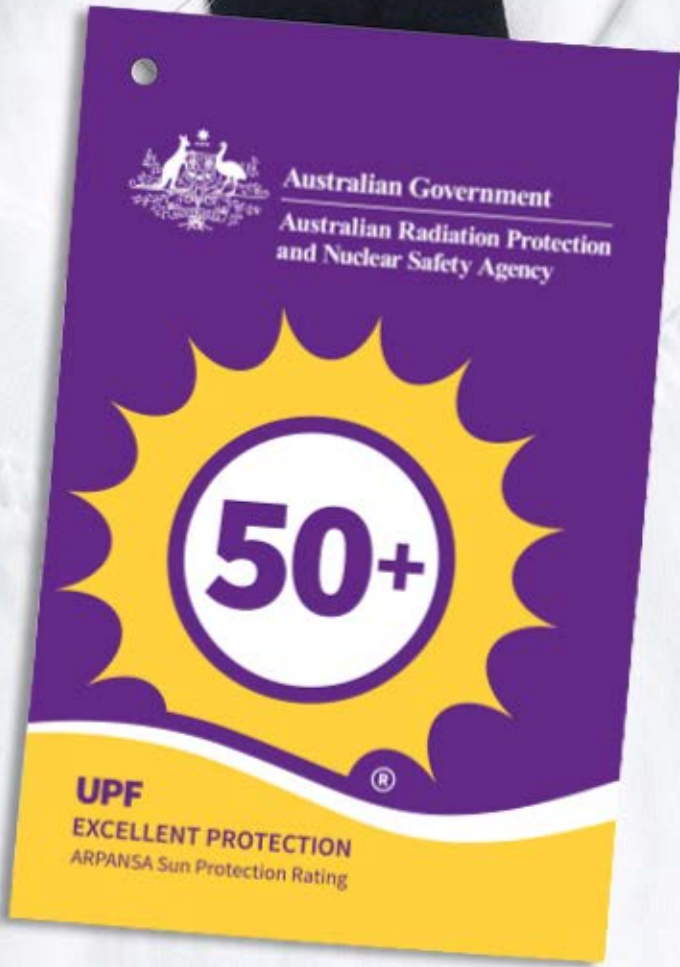
## Pricing

There's an annual licence fee to use the trade mark.

The cost of swing tags depends on how many you order. Tags are packaged in bundles of 500.

Number of swing tags	Number of bundles	Cost per bundle
500 – 6000	1 – 12	\$57.50
6500 – 12 000	13 – 24	\$56.00
12 500 – 30 000	25 – 60	\$41.50
30 500 – 90 000	61 – 180	\$40.50
90 500+	181+	\$39.00

All prices include GST



Sun protection labels (swing tags)



# Sunglasses

## Ensure your sunglasses reflect the safety standard

Sunglasses cannot be sold in Australia unless they have been tested to AS/NZS 1067. We can test your sunglasses for the transmission requirements so you can label them correctly.

### Our sunglass testing includes:

- non-prescription sunglasses mounted in a spectacle frame
- rimless sunshields and one-piece visors
- clip-on and slip-on type sunglasses
- children’s sunglasses (not toy sunglasses)
- fashion spectacles and light tint sunglasses.

### The following do not adhere the sunglass standard:

- prescription and readymade spectacles
- safety glasses and safety goggles
- eyewear for protection against radiation in solaria
- eye protectors for impact sport
- glasses for use as toys and clearly and legibly labelled as toys.

What’s **new** in the standard?

The Australian mandatory safety standard has introduced **more stringent requirements** for UV protection of your eyes.

## Pricing

Type of lens	Cost per sample
Uniformly tinted	\$175.00
Polarised	\$200.00
Gradient tinted	\$230.00

All prices include GST



# Shade fabric

## Shade fabric that provides the right protection

Do you supply shade fabrics to schools, workplaces or public places? Shade fabrics are made for different purposes and we can test shade fabrics that are used for horticultural purposes and for human protection.

The degree of protection that shade fabrics provide against the ultraviolet radiation (UVR) from the sun is influenced by weave density, color, stretch, and composition. We test the shade fabrics in our laboratory.

An important consideration is the design of the shade structure and how much sun protection it provides at different times of the day.

What's **new** in the standard?

The previous version of the standard only allowed testing of shade fabric for horticultural use. The revised version of the standard includes **human shade protection**.

### Pricing

Number of samples	Cost per sample
1-10	\$200.00
10+	\$170.00

All prices include GST



# Film, glass & materials

## Protecting your customers with peace of mind

We test the UV radiation transmittance of your products and determine a protection factor rating so that your customers can be assured of its sun protective properties.

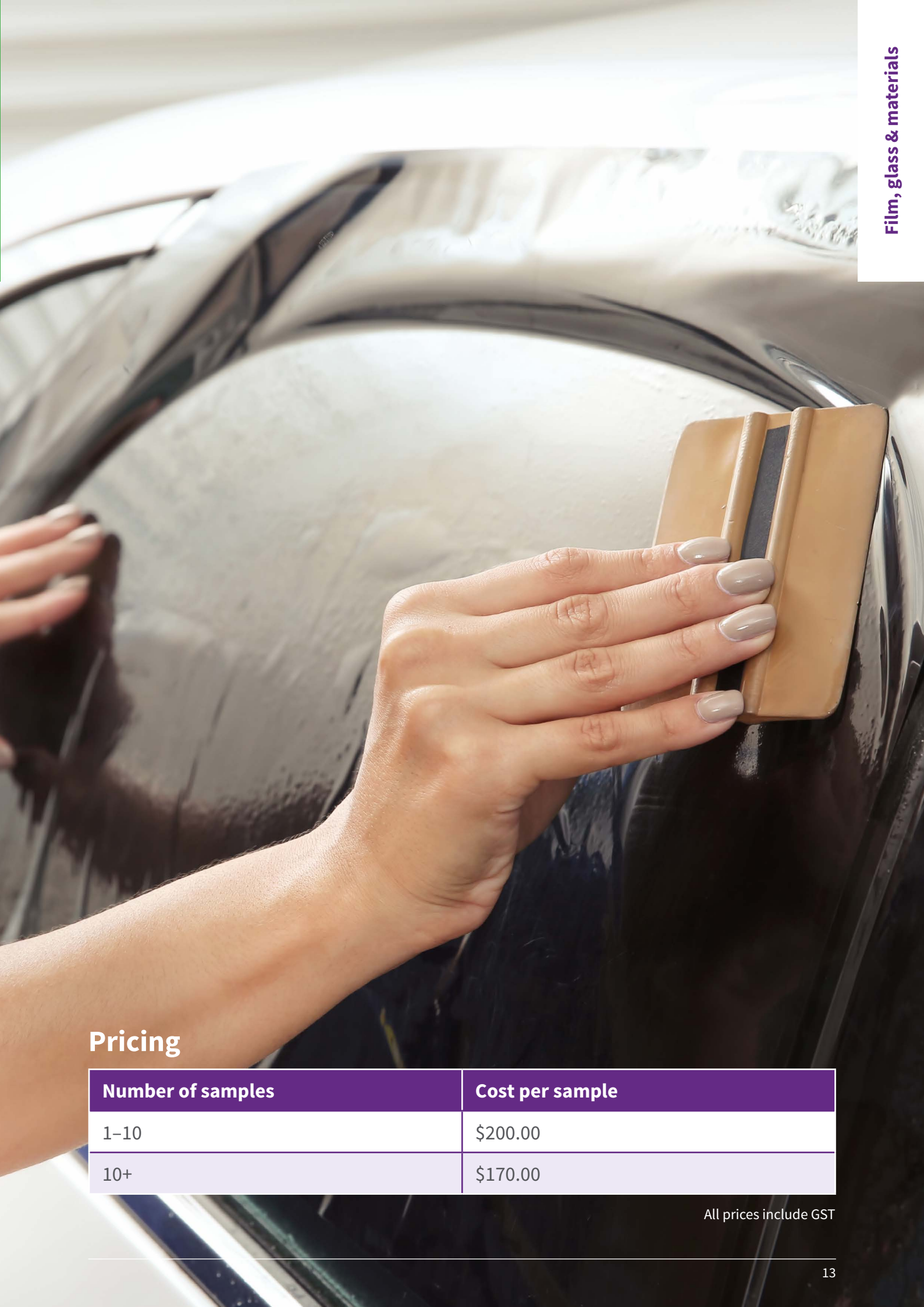
Various factors will determine the effectiveness of your materials when used for sun protection.

We test:

- window films for cars and buildings
- glass for automotive and building use
- transparent and translucent roofing and building materials
- polycarbonate and other plastic materials
- quality control of plastic wrapping used for protection of products against light.

### Additional testing

We can provide **UV and visible** light transmission testing for all these products



### Pricing

Number of samples	Cost per sample
1-10	\$200.00
10+	\$170.00

All prices include GST



# UV hazards & sunscreen

## Occupational exposure and UV hazard assessments

We can evaluate UV exposure situations in your workplace or public space. Typical artificial sources include welding, tanning beds, nail curing devices, signature recognition, bug zappers, lights for fluorescence, curing of printing inks, medical devices and sterilisation and purification equipment.

We can assess:

- workers engaged in outdoor occupations
- artificial sources of UV radiation in workplace situations
- industrial processes and medical applications
- lamps for domestic and commercial use
- the protection provided by protective equipment, roofing materials, windows and transparent building materials.

Contact us for a quote for assessment of your exposure situation.

## The future of sunscreen testing services

Sunscreen products are tested to the requirements set out in AS/NZS 2604: Sunscreen products – Evaluation and classification. These tests require testing on humans. A specific amount of sunscreen is applied to the skin and the area is irradiated with UV radiation to test the effectiveness of the sunscreen. This is a widely accepted method and tests the sunscreen under real conditions. However, we are developing an alternative laboratory method to test sunscreens that does not involve human participants. Watch this space for further developments in sunscreen testing in Australia.





# **Ultraviolet radiation services**

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