



# Allunga Exposure Laboratory

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**Attention:**  
Andrew Keir  
**Spraylat International Pty Ltd**  
1 Bardsley Road  
Earlstrees Industrial Estate  
Corby Northhamptonshire UK

**Date:** 03-Dec-2013  
**Your Reference:** E Glass  
Advanced Clear + Opaque  
**Our Reference:** 12J24WF1-2  
**Exposure Start:** 31-Oct-2013  
**Exposure End:** 01-Dec-2013

## Exposure End Notification

This notice certifies that the series below was exposed at Allunga Exposure Laboratory to the following specifications:

**Client Series:** 2 Coatings on 'E' Glass: 1. Advanced 'Clear', 2. Advanced 'Opaque'

**Exposure Type:** Altrac accelerated exposure

**Start Date & End Dates:** **First exposure:** 24-October-2012 – 07-Jan-2013  
**Second exposure:** 31-October-2013 -- 01-December-2013

**Duration of Exposure:** **First exposure:** 2 Months, 2 Weeks  
**Second Exposure:** 4 Weeks, 3 Days

**Radiation:** 240,000 Langleys in total

**Samples Returned:** Yes

Chris Cooper, Director,  
Allunga Exposure Laboratory

## Allunga Laboratory UV Exposure Test

Spraylat International Ltd commissioned the Allunga UV exposure tests to establish how Protectapeel Glasstrip Advanced would perform when subjected to severe UV radiation. The criterion of the test was to confirm that the coating would withstand extreme levels of UV attack and still peel from the surface.

### What do Allunga Laboratory do?

Allunga's main laboratory and exposure facilities are based at Antill Plains, about 20 km from the centre of Townsville, Australia. Townsville averages total global solar radiation levels of approximately 7500MJ/m<sup>2</sup> per year, and UV-R levels of approximately 400 MJ/m<sup>2</sup> (below 385 nm.) per year.



Allunga Exposure Laboratory is an accredited laboratory with the Australian National Association of Testing Authorities (NATA) — which gives world-recognised accreditation — and maintains operational quality systems that exceed the international requirements of ISO/IEC 17025.

### What is an Accelerated Exposure Test?

Allunga laboratories used an Altrac accelerated exposure method to carry out the test.

Altrac Units are a type of testing rack with a Fresnel- like array of 10 mirrors attached to it. The mirrors focus the sun's radiation onto the target Glasstrip Advanced sample area. This method speeds up the weathering process, enabling reliable indications of long-term performance in a fraction of the time.



The sun's radiation delivered on to the sample is measured by a specially designed pyranometer sensor and is recorded in Langley units.

### Exposure Results

Protectapeel Glasstrip Advanced was exposed under these conditions for 2 periods of 2 months and 4 weeks 3 days respectively.

During these 2 periods Protectapeel Glasstrip Advanced was exposed to a total of 240000 Ly. This is approximately 5 times the amount of radiation typical for such a period. After exposure to 240000 Ly Protectapeel Glasstrip Advanced peeled successfully and showed no sign of either thermal or photo degradation. This shows that Protectapeel Glasstrip Advanced has excellent external weather resistance

### **What is a Langley?**

The Langley (Ly) is a unit of energy distribution over area and is a measure of solar radiation. 1 Ly = 1 thermochemical calorie per square centimetre = 41840 Jm<sup>-2</sup> (Joules per square metre).

Protectapeel Glasstrip Advanced was exposed to a total of 240000 Ly, this is equivalent to around 10 Gigajoules (billion joules) per metre squared.

10 Gigajoules is...

More than the amount of potential chemical energy in a barrel of oil when combusted.

Enough energy to power an average sized house in the UK for 1 year.

Comparable to eating 9000 mars bars

### **What does this mean for Protectapeel Glasstrip Advanced?**

Protectapeel Glasstrip Advanced currently has a field life of 12 months. Following this successful testing Spraylat International Ltd will now review the field life with a view to increase it further.

For more information contact Spraylat International Ltd on +44 (0)1536 408409 or [enquiries@spraylat.co.uk](mailto:enquiries@spraylat.co.uk)