

Manufacturer's Statement – Bushfire Code Compliance

PRODUCT: SOLATUBE DS TUBULAR DAYLIGHTING SYSTEMS

The Australian Building Code states (P3.7.4) that performance requirement (P2.3.4) is satisfied for buildings.....located in a designated bushfire prone area if it is constructed in accordance with AS 3959 (Refer State and Territory variations where applicable).

The methodology for determining a given building's construction requirements are:

1. Determine whether the building is in a designated bushfire prone area
2. Using the site classification procedure, determine the bushfire attack level (BAL)
3. Select the appropriate construction solutions for BAL level.

The levels are based on heat flux exposure and range from Low to Flame zone: There are now six levels of bushfire attack.

Table #1

| <u>BUSHFIRE ATTACK LEVEL BAL</u> | <u>Description of predicted bushfire attack and levels of exposure</u> |
|---|---|
| BAL – LOW | There is insufficient risk to warrant specific construction requirements <12.5kW/m ² |
| BAL – 12.5 | Ember attack 12.5kW/m ² |
| BAL - 19 | Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux between 12.5 and 19kW/m ² |
| BAL - 29 | Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux between 19 and 29kW/m ² |
| BAL - 40 | Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux with the increased likelihood of exposure to flames 40kW/m ² |
| BAL – FZ (Flame Zone) | Direct exposure to flames from fire front in addition to heat flux and ember attack kW/m ² |

Australia's history of bushfires means that many buildings could come under threat from serious bushfire danger. Solatube Australia has designed new bushfire protection accessories that can be installed into our Solatube products.

1. A unique non-combustible, Laminated GRADE A safety glass disc and metal support ring.
2. A full range of metal roof flashings to be used in bushfire attack regions.

Our new Solatube bushfire protection has been built in close consultation with the CSIRO's Manufacturing and Infrastructure Technology division to achieve Bushfire Attack Level ratings within AS 3959.

Bushfire Standard identifies six Bushfire Attack Levels (BAL). Building products must meet these specific level requirements. The new Solatube bushfire protection add-on kit can meet the BAL-29 standard (refer checklist for BAL-29 specific requirements). The bushfire protection add-on kit will not meet requirements of BAL-40 or BAL-FZ. A Building Certifier must be consulted to determine if the product can be used.

To help you make sure you supply and install a skylight that does comply with the new bushfire code AS 3959 we have developed the following checklist to assist you. But you remain responsible for correct product selection and correct installation!

NEW Solatube bushfire attack tube protection



NEW Solatube bushfire attack metal roof profile



CHECKLIST ONLY

Building Certifier must be consulted before final product selection

Note these tips are not relevant for BAL-40 / BAL-FZ

| <u>Skylight Requirements for BAL-Low to BAL-29 for AS 3959</u> | <u>Solatube Australia Comments</u> |
|--|---|
| Roof penetration shall be adequately sealed at the roof to prevent gaps greater than 3mm. | All gaps greater than 3mm must be sealed to pass inspections. |
| The material to seal the penetration shall be non-combustible. | Solatube Australia will provide you with Promaseal Fire Rated Acrylic Sealant when you purchase our bushfire protection accessory kit. You must use the sealant we provide. |
| Openings in vented roof lights....shall be fitted with ember guards made from a mesh or perforated sheet with a maximum aperture of 2mm, made of corrosion resistant steel, bronze or aluminum. | Solatube Australia does not supply a vented TDD product to meet this requirement. |
| All overhead glazing shall be Grade A laminated safety glass complying with AS 1288. | This requirement is not applicable for the Solatube TDD bushfire protection as we do not offer a glazed roof light (i.e roof window). |
| Glazed elements in roof lights and skylights may be of polymer, provided a Grade A safety glass diffuser, complying with AS1288, is installed under the glazing. Where glazing is an insulating glazing unit (IGU), Grade A toughened safety glass, minimum 4mm, shall be used in the outer pane of the IGU. | The Solatube TDD bushfire protection accessory kit is a minimum 6mm thickness polished reinforced Grade A safety glass. |
| Flashing elements of tubular skylights may be of a fire-retardant material in "BAL 12.5 & Bal 19 zones", provided the roof integrity is maintained by an under-flashing of a material having a flammability index no greater than five. | Solatube Australia supplies metal flashings when they are required to meet bushfire attach levels. Metal roof flashings must be used in conjunction with bushfire protection add-on kits to meet BAL-29 (will not meet BAL-40 & BAL-FZ levels). |
| BAL-29 Specific Requirements for AS 3959 | |
| Where roof lights are installed in roofs having a pitch of less than 18 degrees to the horizontal, the glazing shall be protected with ember guards made from a mesh or perforated sheet with a maximum aperture of 2mm, made of corrosion resistant steel, bronze or aluminum. | >18 degrees roof pitch – use standard bushfire protection add-on kit in conjunction with metal roof flashing. <18 degree roof pitch – additional ember guard must be provided (supplied by others) in conjunction with standard bushfire add-on protection kit with metal roof flashing. |

Solatube TDD Bushfire Protection Accessory Kit – Product Specification & Parts

Please contact Solatube Australia on 1800 131 619 When you require more Info about installing skylights Into bushfire prone areas

