Able Canopies

Polycarbonate Fire Ratings & Technical Data

All of our polycarbonate shade and shelter systems are covered with polycarbonate sheets that have been tested and classified to recognised fire performance standards. Please see the fire ratings for our core canopies and shelters below.

Depth	Fire Rating	UV Protection	Light Transmission	Thermal Transmittance	Products	Certificate Download Link
Structured Polycarbonate Sheets						
4-35mm Brett Martin Marlon ST Multiwall	B-s1, d0	Over 98%	5-82%	As low as 0.83 W/m²K	· Tarnhow timber range · Coniston range (roof panels) · Kensington range · Freestanding canopies	**Download Now**
16mm-35mm Palram Triple Wall: · **Sunlite X-Lite** · **Sunlite X-Lite CL** · **Sunlite X-Lite Solar Control**	B-s2, d0	Up to 99.9%	25-80%	2.3 – 3 W/m²K	· Tarnhow timber range · Coniston range (roof panels) · Kensington range · Freestanding canopies	**Download Now**
8-10mm Palram Sunpal	B-s1, d0	Up to 99.9%	20-90%	2.45 to 1.50 Watts/m².°C	· Sunpal polycarbonate glazing system	**Download Now**
Solid Polycarbonate Sheets						
5mm Brett Martin Marlon FS & FSX	B-s1, d0	Over 98%	5-82%	As low as 0.83 W/m²K	· Kensington range · Cycle & waiting shelters · Canopy side panels	**Download Now**
3-6mm Palram Sunglaze	B-s1, d0	Up to 99.9%	20-90%	5.43 - 5.04 Watts/m².°C	· Sunglaze polycarbonate glazing system	**Download Now**

The above specifications were correct at the time of publication and may be subject to change.
When ordering, please ask for the fire ratings specific to your chosen product for the most up to date specifications.

Fire Ratings Explained

B	s1	d0
Reaction to Fire: Stands for very limited combustibility. It sits just below non-combustible materials (A1 and A2), meaning it will char or burn very slowly under direct flame without feeding the fire.	Smoke Production: The scale goes from s1 (best/least smoke) to s3 (heavy smoke). An s1 rating helps keep escape routes clear and safe from toxic smoke.	Droplets: Stands for zero flaming drops or particles. The scale goes from d0 (none) to d2 (lots). A d0 rating means no burning pieces fall off to start new fires below.

B	s2	d0
Reaction to Fire: Stands for very limited combustibility. It sits just below non-combustible materials (A1 and A2), meaning it will char or burn very slowly under direct flame without feeding the fire.	Smoke Production: The scale goes from s1 (best/least smoke) to s3 (heavy smoke). An s2 rating has an intermediate level for smoke intensity. It releases a moderate amount of smoke during a fire.	Droplets: Stands for zero flaming drops or particles. The scale goes from d0 (none) to d2 (lots). A d0 rating means no burning pieces fall off to start new fires below.

UV Protection Explained:

UV protection refers to the fabric's ability to block harmful ultraviolet (UV) radiation from passing through the material to the space underneath.

A higher percentage of protection creates a cooler area underneath and helps to protect persons underneath, reducing the risk of skin damage caused by the sun.

A high UV percentage also helps to keep the inside of buildings cool when a canopy is installed adjacent to a building as it blocks most of the sunlight from entering through the windows, dramatically reducing solar gain on those hot, summer days.

Our polycarbonate panels are co-extruded on both sides of the panels during the manufacturing process, which means the panels will not turn yellow over time due to sun exposure.

Light Transmission Explained:

Light transmission is the percentage of sunlight that passes through the polycarbonate, it denotes how much light enters the underneath of the canopy.

Thermal Transmittance Explained:

Thermal transmittance on a canopy is the rate at which heat moves through the canopy structure, measured as a U-value. The lower the U-value, the more heat transfer is blocked during hot weather.

Products Explained:

This is the canopy and shelter products that the polycarbonate sheets are available with from Able Canopies.

REASONS WHY WE USE POLYCARBONATE

Perspex (acrylic) is often used as a canopy roof covering, particularly within budget-conscious canopy ranges. While Able Canopies does offer acrylic roof panels within selected budget entrance canopy systems, **our core commercial canopy range predominantly uses high-quality polycarbonate roofing**.

The table below compares polycarbonate with Perspex (acrylic), highlighting some of the key differences between the two materials to help you make an informed choice when investing in a new canopy for your commercial setting.

Polycarbonate vs Perspex:

Feature	Polycarbonate (Supplied by Able Canopies)	Perspex/Acrylic (NEVER supplied by Able Canopies)
Reaction to fire	Our polycarbonate: **B-s1, d0** and **B-s2, d0**	Commonly **Class E** under ISO 11925-2
Behaviour when burning	**'d0'** means zero flaming drops or particles and therefore no burning pieces fall onto the ground below to start new fires	Combustible and, once ignited, will continue to burn and produce molten droplets that continue to burn
Smoke	**'s1'** helps keep escape routes clear and safe from toxic smoke. **'s2'** has an intermediate level for smoke intensity. It releases a moderate amount of smoke during a fire.	Generally produces very little smoke
Impact resistance	Very high – particularly suitable where accidental impact or vandalism is possible. 250x stronger than glass	Less impact resistant than polycarbonate. 17x stronger than glass
School environments	Ideal for areas where balls, objects or accidental impacts may hit the roof	Can be used for glazing, but lower impact resistance is a consideration in active school environments
Commercial/ public spaces	Well suited to high-traffic areas, roofing and safety glazing	Suitable for many glazing applications
Clarity	Excellent; clear grades can provide very high light transmission	One of acrylic's major strengths – exceptionally high optical clarity
Weather resistance	Excellent when an exterior-grade, UV-protected product is specified	Also excellent; PERSPEX specifically promotes strong UV/weather resistance
Scratch resistance	Generally more prone to scratching than acrylic	Acrylic has an advantage and is generally more scratch resistant
Canopy/ roofing suitability	Excellent – roofing is specifically identified as a suitable application by manufacturers/ suppliers	Possible, but its properties may make it less attractive where high impact resistance and enhanced reaction-to-fire performance are required
Overall for school/ commercial canopies	Strong choice where safety, durability and impact resistance are priorities	Has advantages in clarity, surface hardness and aesthetics, but specification needs careful consideration for demanding canopy applications
Longivity	10 year warranty 25 year life expectancy	Warranty varies with manufacturer Average 10 - 20 year life expectancy

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