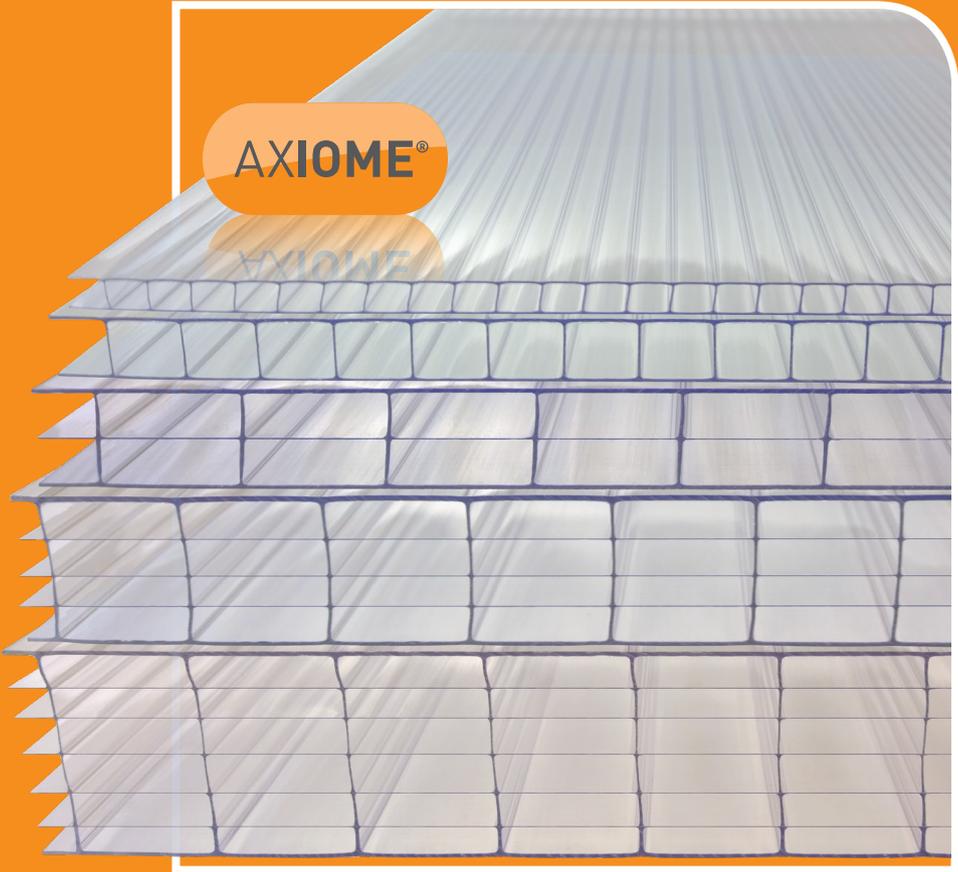




# Multiwall Polycarbonate Products Technical Guide



# High Quality Multiwall Glazing Sheet

Over the past two decades AXIOME® multiwall polycarbonate sheet has become an increasingly popular roofing and screening material for a large range of applications. A few examples of these are shown in these pages.

AXIOME® multiwall is the result of years of technical development and embodies a wide range of beneficial qualities, making it the ideal solution for an extensive array of requirements in the conservatory, construction, horticulture and internal design industries.



## Common uses:

- ✓ Commercial Rooflights and Barrel Vaults
- ✓ Airport Walkways
- ✓ Covered School Play Areas
- ✓ Bus Shelters and Smoking Shelters
- ✓ Swimming Pool Roofs
- ✓ Commercial Chicken Shed Windows
- ✓ Carports
- ✓ Acoustic Barriers
- ✓ Orangeries and Conservatories
- ✓ Greenhouse Glazing

## Qualities:

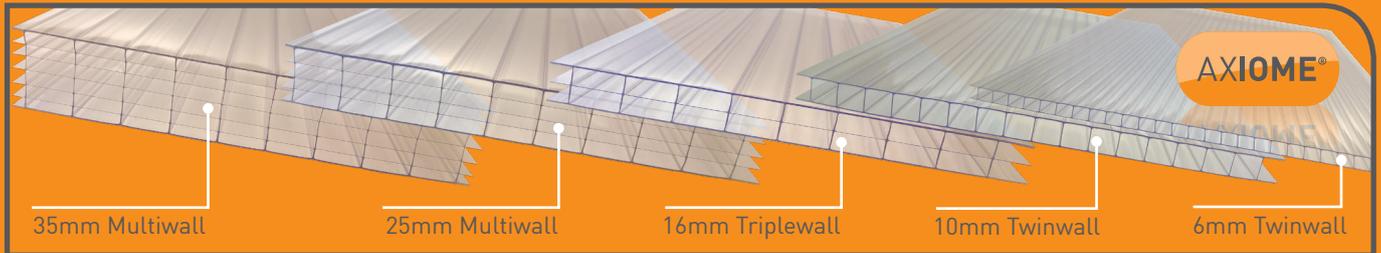
- ✓ Lightweight Reducing Stress on Structures
- ✓ Easy to Cut Onsite as Required
- ✓ Excellent Rigidity
- ✓ UV Stabilised
- ✓ Highly Weather Resistant
- ✓ Excellent Fire Rating
- ✓ Good Thermal Insulation
- ✓ Does Not Shatter Like Glass With Impact



# AXIOME® : Clear

Clear AXIOME® sheets are the most common option, offering the greatest light transmission. The AXIOME® sheets are widely used for an incredible range of applications around the globe. From canopies and covered walkways, to carports and conservatories, equestrian areas, childrens' play areas, cold frames and horticultural uses, AXIOME® is a truly versatile product.

## AXIOME® Clear Sheet Sizes

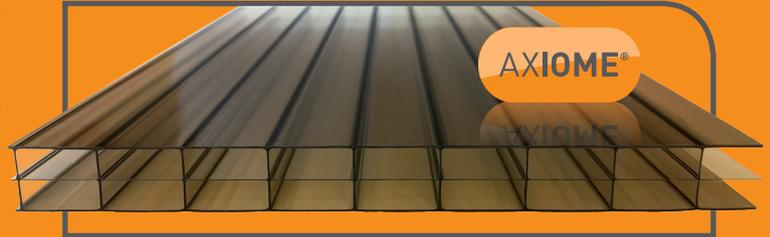


## AXIOME® Clear

Metric Lengths									Thickness (code)	Imperial Lengths	
2000mm	2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	6000mm	7000mm		10,000mm	
(6mm Twinwall - standard widths are 690mm, 1050mm and 2100mm or cut to size)											(available in width of 980mm)
✓	-	✓	-	✓	-	-	✓	✓	6mm [AS6C]	-	
10mm Twinwall - standard widths are 690mm, 1050mm, 1400mm and 2100mm or cut to size											
✓	✓	✓	✓	✓	✓	✓	✓	✓	10mm [AS10C]	-	
16mm Triplewall, 25mm and 35mm Multiwall available in standard widths of 690mm, 840mm, 1050mm, 1250mm, 1400mm, 1700mm and 2100mm or cut to size											
✓	✓	✓	✓	✓	✓	✓	✓	✓	16mm [AS16C]	✓	
✓	✓	✓	✓	✓	✓	✓	✓	✓	25mm [AS25C]	-	
✓	✓	✓	✓	✓	✓	✓	✓	✓	35mm [AS35C]	-	

## AXIOME® : Bronze

The AXIOME® Bronze sheet provides shading from glare and a popular aesthetic appearance. Being a darker colour, choosing Bronze tint AXIOME® will increase heat absorption creating a warmer inside temperature when located in areas of direct sunlight.



### AXIOME® Bronze

Thickness (code)	Metric Lengths								
	2000mm	2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	6000mm	7000mm
10mm Twinwall - standard widths are 690mm, 1050mm and 2100mm or cut to size									
10mm (AS10B)	✓	-	✓	-	-	-	-	✓	-
16mm Triplewall, available in standard widths of 690mm, 840mm, 1050mm, 1400mm, 1700mm and 2100mm or cut to size									
16mm (AS16B)	✓	✓	✓	✓	✓	✓	✓	✓	✓
25mm and 35mm Multiwall available in standard widths of 690mm, 840mm, 1050mm, 1250mm, 1400mm, 1700mm and 2100mm or cut to size									
25mm (AS25B)	✓	✓	✓	✓	✓	✓	✓	✓	✓
35mm (AS35B)	✓	✓	✓	✓	✓	✓	✓	✓	✓

## AXIOME® : Opal

The Opal tint AXIOME® sheet provides a white tint impression. The advantages of this Opal AXIOME® tint are that it provides a degree of privacy whilst maintaining a good light transmission and a bright overall appearance. In addition the Opal tint reduces the level of solar energy entering the sheet, keeping covered areas cooler when installed in areas exposed to higher levels of direct sunlight.



### AXIOME® Opal

Metric Lengths									Thickness (code)	Imperial Lengths	
2000mm	2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	6000mm	7000mm		10,000mm	
10mm Twinwall - standard widths are 690mm, 1050mm, 1400mm and 2100mm or cut to size										10mm (AS100)	-
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
16mm Triplewall, available in standard widths of 690mm, 840mm, 1050mm, 1400mm, 1700mm and 2100mm or cut to size										16mm (AS160)	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
25mm and 35mm Multiwall available in standard widths of 690mm, 840mm, 1050mm, 1250mm, 1400mm, 1700mm and 2100mm or cut to size										25mm (AS250)	-
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	35mm (AS350)	-

## SOLEK® : Clear (Technical brochure available for more details)

AXIOME SOLEK® sheets have a silver foil insert in every flute which provides up to 80% rejection of solar energy. SOLEK® has the effect of keeping indoor areas cooler whilst allowing in an acceptable level of light. More information is available on the *SOLEK® Technical Brochure*.



### SOLEK® Clear

Thickness (code)	Metric Lengths							
	2000mm	2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	6000mm
	16mm Triplewall, 25mm and 35mm Multiwall available in standard widths of 690mm, 840mm, 1050mm, 1250mm, 1400mm, 1700mm and 2100mm or cut to size							
<b>16mm</b> (AS16SK)	✓	✓	✓	✓	✓	✓	✓	✓
<b>25mm</b> (AS25SK)	✓	✓	✓	✓	✓	✓	✓	✓
<b>35mm</b> (AS35SK)	✓	✓	✓	✓	✓	✓	✓	✓

## AXIOME® : Thicker or Thinner Specification

AXIOME® sheets come in several thicknesses which provide solutions for various applications. This chart shows the relative benefits between each option.

Thickness	Qualities / Benefits
6mm Twinwall	Fits most Greenhouse beads, high light transmission, best bending radius
10mm Twinwall	Good bending radius
16mm Triplewall	Stronger structure than twinwall, average insulation value
25mm Multiwall	Good Insulation, good structural loading capacity
35mm Multiwall	Higher insulation value, best structural loading capacity
AXIOME®-80 76mm Multiwall	High thermal insulation value, good loading capacity, sonic sound noise reduction layer (SNR)

## Colour Concepts

There are several myths surrounding each tint, for example whilst bronze sheet offers a shading effect, it does not reduce the heat, in fact it attracts more heat. We have set out the guidelines to explain the properties provided by each shade.

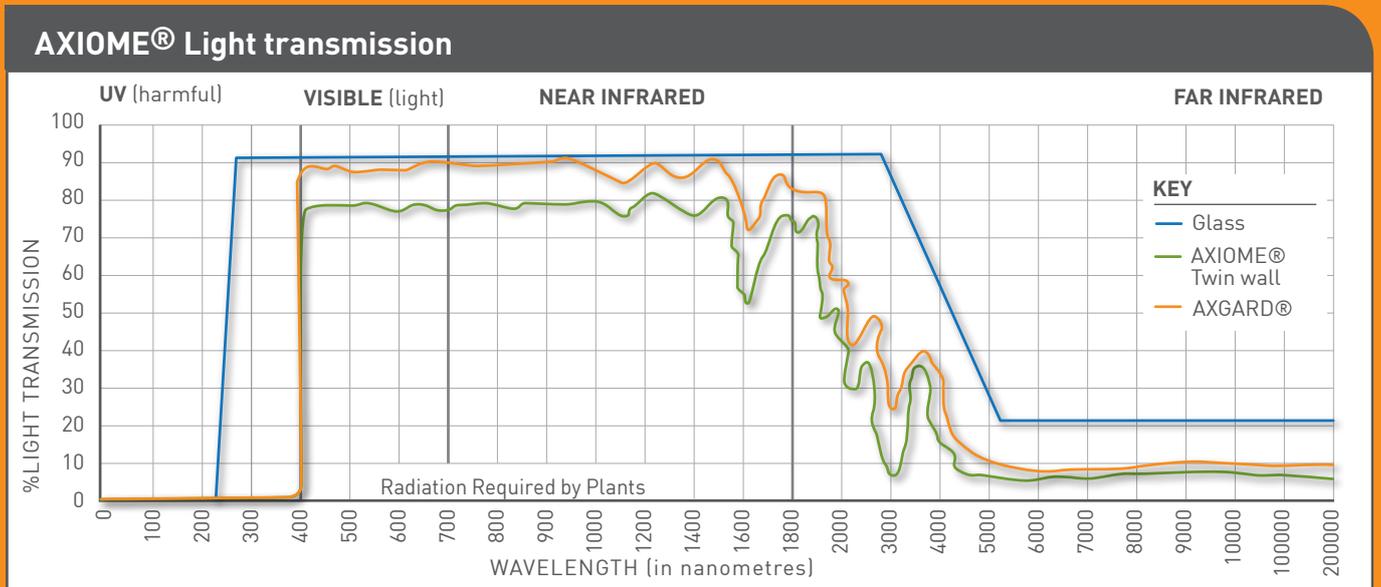
### What Colour?

Colour	Qualities / Benefits
Clear	Maximum light transmission and brightness; protects from harmful UV
Opal	Reflects some heat, provides shading and privacy
Bronze	Reduces glare and provides shading, will tend to increase heat build up
Clear Silver SOLEK®	Rejects approximately 80% of the solar energy dramatically reducing heat build up
Silver Bronze SOLEK®	Rejects a high degree of solar energy, reducing heat build up and provides shading



## AXIOME® : Light Transmission

AXIOME® polycarbonate almost totally blocks harmful UV radiation whilst still allowing exceptional levels of visible light transmission.

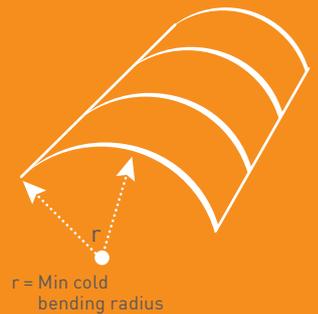


# AXIOME® : Technical Data

The huge diversity of applications for which AXIOME® Multiwall is used inevitably means that a perceived strength for one project can be a disadvantage for another use. The tables below are intended for guideline use when seeking particular qualities for any specification. Our vast range provides an option for probably every eventuality.

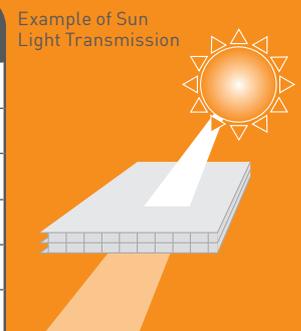
## Physical Properties

Thickness	Area Weight Kg/m <sup>2</sup>	U-Value W/m <sup>2</sup>	Sound reduction level db	Min cold bending radius mm
AXIOME® 6mm Twinwall	1.3	3.5	18	1250
AXIOME® 10mm Twinwall	1.5	3.0	20	1750
AXIOME® 16mm Triplewall	2.4	2.3	20	2750
AXIOME® 25mm Multiwall	3.0	1.7	22	5000
AXIOME® 35mm Multiwall	3.4	1.3	22	7000
AXIOME®-80 76mm Multiwall	6.9	0.8	43	TBC



## Light Transmission

Thickness	Clear %	Bronze%	Opal %	SOLEK®%
AXIOME® 6mm Twinwall	81	N/A	N/A	N/A
AXIOME® 10mm Twinwall	81	52	48	N/A
AXIOME® 16mm Triplewall	74	31	42	25
AXIOME® 25mm Multiwall	62	22	34	23
AXIOME® 35mm Multiwall	51	20	25	20
AXIOME®-80 76mm Multiwall	N/A	N/A	15	10



## Fire Performance

Thickness	Method	Fire rating class
AXIOME® 6mm Twinwall	N/A	N/A
AXIOME® 10mm Twinwall	BS476: Part 7	1Y
AXIOME® 16mm Triplewall	BS476: Part 7	1Y
AXIOME® 25mm Multiwall	BS476: Part 7	1Y
AXIOME® 35mm Multiwall	BS476: Part 7	1Y
AXIOME®-80 76mm Multiwall	TBC	TBC



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### Disclaimer

Once AXIOME® multiwall polycarbonate sheet has left our warehouse, we cannot control transportation, storage, installation or handling, nor can we influence installation conditions, Clear Amber Group cannot be held responsible in any

way for condensation issues or other installation problems that may arise, or any associated remedial work. All advice is offered in good faith based on our experience. Installers should apply best practices before and during installation.

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