A Wide Variety of Wall Configurations and Thickness

MACROLUX
Polycarbonate Multi-Wall Panels
CO-EXTRUDED THERMOGLAZING

Multi-wall (Twin, Triple, Five, X-Strong and M-wall) polycarbonate panels from CO-EX Corporation are assuming a more and more important role in the transparent building materials market. To meet your growing requirements and to serve you more efficiently, we have a fully staffed customer service department. Let us show you what an enjoyable experience it can be to work with CO-EX Corporation!

APPLICATIONS

Macrolux® is perfect for applications requiring a material which offers; high light transmission, thermal insulation, lightness of weight with strength, high shock resistance, flame retardance, great economy, vandal resistance and design flexibility. Consider using Macrolux® panels in your next project.

HORTICULTURAL: for greenhouse coverings where good thermal insulation is necessary together with high light transmission.

INDUSTRIAL BUILDING: for various glazing applications, skylights, walkways, windows, shelters, and insulated roofing.

ARCHITECTURAL GLAZING: with the ability to be cold-formed into arches, Macrolux® offers architects true design freedom. Consider the possibilities of using Macrolux® for walkways, indoor shopping centers, swimming pool coverings, skylights, and other enclosures.

HOME IMPROVEMENT: for easy do-it-yourself projects like window replacements, shower enclosures, hobby greenhouses, partitions, light covers, patio covers, carports and more.

Macrolux® sheeting has been designed as a glazing product. It is the sole responsibility of the customer to confirm with their own architect, engineer or other professional consultants that the goods offered by CO-EX meet the requirements and specifications of the particular project and use for which they are being purchased.

VIRTUALLY UNBREAKABLE

You can be assured that from transport to installation, Macrolux® will maintain its durability. Even when exposed to elevated outdoor temperatures over a long period of time, it will maintain its structural integrity. It resists cracking and splintering during fabrication, assuring you a high degree of safety and it can be cold formed on site.
**IMPACT RESISTANCE**
Among the thermoplastic products used in the building industry, Macrolux® co-extruded thermoglazing has a high impact resistance - 200 times greater than glass and 10 times greater than acrylic.

A Macrolux® 8mm panel is so strong it can withstand the impact of a 16 lb. weight, falling 25 feet onto the panel, with no breakage. It will maintain its impact strength over a wide temperature range from -40°F to 250°F.

**SAVES ENERGY**
The multi-walled construction of the Macrolux® sheet offers high thermal resistance, giving excellent thermal insulating values while blocking UV transmission.

**CONDENSATION CONTROL**
A factory applied condensation control is available on Macrolux® panels. Reducing surface tension, the condensation control allows water to spread into a thin sheet rather than form into droplets. It is available for all applications from greenhouses to backyard patio covers.

## Technical Data
Immediate delivery of sheets in 4 and 6 foot widths. Other widths are available by special order. Sheets may be supplied cut to your exact size specifications.
Length tolerance for custom produced materials is -0 +30mm.
(Sheets over 236.25” (6m) have a tolerance of -0 +30mm)

<table>
<thead>
<tr>
<th>SHEET THICKNESS</th>
<th>MM</th>
<th>4*</th>
<th>6</th>
<th>6*</th>
<th>8</th>
<th>8</th>
<th>10</th>
<th>10*</th>
<th>16</th>
<th>16*</th>
<th>25</th>
<th>32*</th>
<th>35*</th>
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</thead>
<tbody>
<tr>
<td>WALL TYPE</td>
<td></td>
<td>Twin</td>
<td>Twin</td>
<td>Triple</td>
<td>Twin</td>
<td>Triple</td>
<td>Twin</td>
<td>Triple</td>
<td>Five</td>
<td>X-Strong</td>
<td>Five</td>
<td>Five/M</td>
<td>Five/M</td>
</tr>
<tr>
<td>RIB SPACING</td>
<td>INCH</td>
<td>0.236</td>
<td>0.236</td>
<td>0.315</td>
<td>0.354</td>
<td>0.315</td>
<td>0.354</td>
<td>0.315</td>
<td>0.787</td>
<td>0.551</td>
<td>0.787</td>
<td>1.26</td>
<td>1.26</td>
</tr>
<tr>
<td>STRUCTURE TYPE</td>
<td>Twin Wall Version</td>
<td>Triple Wall Version</td>
<td>Five Wall Version</td>
<td>X-Strong Version</td>
<td>Five M-Wall Version</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIGHT TRANSMISSION</td>
<td>Clear</td>
<td>82%</td>
<td>80%</td>
<td>75%</td>
<td>80%</td>
<td>75%</td>
<td>80%</td>
<td>75%</td>
<td>62%</td>
<td>62%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>ASTM-D1003(%)</td>
<td>Bronze</td>
<td>25%</td>
<td>25%</td>
<td>23%</td>
<td>25%</td>
<td>23%</td>
<td>25%</td>
<td>23%</td>
<td>25%</td>
<td>20%</td>
<td>20%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>U-FACTOR (Btu/ft² h°F)</td>
<td>Opal</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td>55%</td>
<td>55%</td>
<td>40%</td>
<td>40%</td>
<td>25%</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>R-VALUE</td>
<td>R=U/U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIN. BENDING RADIUS</td>
<td>INCH</td>
<td>24</td>
<td>36</td>
<td>36</td>
<td>48</td>
<td>48</td>
<td>60</td>
<td>60</td>
<td>95</td>
<td>95</td>
<td>148</td>
<td>189</td>
<td>207</td>
</tr>
</tbody>
</table>

Tolerances: Thickness ± 5%, Length ± 1/4", Width ± 1/8", Weight ± 5%  
*SPECIAL ORDER ITEM*
EASY TO INSTALL
Macrolux® panels resist cracking and splitting during cutting and drilling.

EXTRA WIDE PANELS
Standard widths of 4 feet and 6 feet are available with lengths up to 39’.

TRANSPARENT
Offering up to 82% light transmission in clear. Also available in bronze, opal, and custom colors by special order.

LIGHTWEIGHT
Weighing just one-eighth the weight of glass, polycarbonate panels do not need the extensive structural support that a heavier glass wall or glazing material requires.

WARRANTY
Macrolux® is backed by a 10 year warranty on light transmission and breakage caused by hail.

UV CO-EXTRUSION
Macrolux® co-extruded thermoglazing incorporates new technology which results in exceptional resistance to aging. Macrolux® multi-wall is a high performance polycarbonate sheet. During manufacturing, a layer of UV absorber is co-extruded onto the surface of the sheet, forming a barrier against UV radiation. This gives Macrolux® multi-wall exceptional resistance to ageing without affecting the mechanical properties and impact strength.

FLAMMABILITY
Macrolux® polycarbonate sheets are classified in accordance with ASTM standards. Compared with other plastic products used in the building industry, Macrolux® multi-wall sheets have an exceptional fire performance and most importantly, do not give off toxic gasses.

BENDING RADIUS
Macrolux® multi-wall sheets can be cold formed and used in many curved applications, for example, arched walkways. Sheets must always be bent longitudinally, never across the width of the sheet.

In applications of this nature it is important to avoid over tensioning of the sheet.
Therefore, when Macrolux® multi-wall is cold formed, the minimum radius should not be less than 150 times the thickness of the sheet.

**LIGHT TRANSMISSION**
Macrolux® multi-wall sheets are available in a wide variety of thicknesses and colors providing up to 82% visible light transmission.

Macrolux® multi-wall sheets are essentially opaque at all wavelengths below 385 nanometers limiting the damaging effects of UV light. They have a clear co-extruded outer surface which provides high stability against the effects of UV radiation and gives excellent durability to outdoor weathering. This unique protection insures long term optimal quality under intensive UV exposure.

**PROPER INSTALLATION**
Macrolux® is supplied with a protective PE film which should be kept on until the sheet is installed. The UV protected side is to be faced towards the sun and is marked with a white printed film, light blue film or a sticker saying Macrolux® multi-wall polycarbonate sheet. Macrolux® crates or sheets should be stored in an area not exposed to the sun, or indirect heat from the sun, which could make the removal of protective film difficult.

Stiff fixing by means of adhesive or putty is to be avoided. Top and bottom ends of a sheet must always be sealed by means of aluminum tape to prevent dust or dirt penetrating the inside of the ribs. Aluminum tape must be protected with proper polycarbonate “U” profiles.
### Chemical Resistance

**CHEMICALS**

- Acetaldehyde
- Acetic acid 5%
- Acetic acid 30%
- Acetic acid
- Acetone
- Acetyle
- Acrylic nitrile
- Acrylonitrile
- Allylic alcohol
- Alum
- Aluminium alum
- Aluminium chloride
- Aluminium oxalate
- Aluminium sulphate
- Amilacetate
- Ammonia
- Ammonia water
- Ammonium chloride
- Ammonium fluoride
- Ammonium hydrate
- Ammonium nitrate
- Ammonium sulphate
- Ammonium sulphide
- Ammonium trichloride
- Aniline
- Antimony pentachloride
- Arsenic acid 20%
- Arsenous acid 20%
- Benzene
- Benzonic acid
- Benzoic aldehyde
- Benzole
- Benzyl alcohol
- Benzy alcohol
- Borax
- Boric acid
- Bromine
- Bromobenzene
- Bromobenzol
- Butane
- Butanol
- Butyl alcohol
- Butyl acetate
- Butylenic glycol
- Butylstearate
- Butyric acid
- Calcium chloride
- Calcium hydrate
- Calcium hypochlorite
- Calcium nitrate
- Calcium soap
- Carbonic acid
- Carbon dioxide
- Carbon sulphide
- Carbon tetrachloride
- Caustic potash 5%
- Caustic soda 5%
- Chloride of lime
- Chlorine gas
- Chlorobenzol
- Chloroform
- Chrome alum
- Chromic acid 20%
- Citric acid 10%
- Concrete
- Copper chloride
- Coppers sulphate
- Coppery chloride
- Creosol
- Cyclohexane
- Cyclohexanox
- Cyclohexanol
- Cyclohexene
- Decalin
- Dimethyl Fluorinate
- Diamylphthalate
- Diethyl ether
- Dimethylformaldexyde
- Diminithalinate
- Dioxane
- Diocetyl adipate
- Diocetyl phtalate
- Diphyl
- Dybutyphthalate
- Ether
- Ethilencloridrinar
- Ethylallic acid
- Ethyl alcohol 96%
- Ethyl acetate
- Ethyl chloridrine
- Ethyl bromide
- Ethyl chloride
- Ethyl ether
- Ethylamine
- Ethylene chloride
- Ethylenic glycol
- Ethylchloridrinidaline
- Formalin
- Formic Acid 30%
- Formal
- Glycerine
- Glycol
- Glycolic acid
- Heptane
- Hexane
- Hydrochloric acid 10%
- Hydrochloric acid 35%
- Hydrofluoric acid
- Hydrogen sulphide
- Industrial petrol
- Iodine
- Iron chloride
- Iron sulphate
- Isomyl alcohol
- Isopropyl alcohol
- Kerosene
- Lactic acid 5%
- Lignin
- Lime wash
- Magnesium chloride
- Magnesium sulphate
- Manganese sulphate
- Mercury
- Mercury chloride
- Methanol
- Methyl alcohol
- Methyl acetate
- Methylamine
- Methylene chloride
- Methylaric ester
- Methylisobutylketone
- Methylketone
- Naphtha
- n-butyl alcohol
- Nickel sulphate
- Nitric acid 10%
- Nitrobenzenes
- Nitrobenezole
- Nitrous gases
- Oleic acid
- Oxalic acid
- Oxygen
- Oxzone
- Pentane
- Perchloroethylene
- Perchloric acid
- Perchloric acid 10%
- Petroleum
- Phenolic acid
- Phenolic acid
- Phenol
- Phosphoric acid
- Phosphor trichloride
- Phosphorus chloride
- Phosphoric Oxylchloride
- Potassium alum
- Potassium bromide
- Potassium carbonate
- Potassium chloride
- Potassium cyanide
- Potassium dichromate
- Potassium-
- metabisulphite 4%
- Potassium nitrate
- Potassium-
- perchlorate 10%
- Potassium-
- permanganate 10%
- Potassium-
- persulphate 10%
- Potassium-
- Rhodanate 10%
- Potassium sulphate
- Potassium sulphocyanide
- Propene
- Propargylic alcohol
- Propionic acid
- Propyl alcohol
- Pyridine
- Soda
- Sodium bicarbonate
- Sodium bisulphate
- Sodium bisulphite
- Sodium carbonate
- Sodium chloride 10%
- Sodium hydrate 1%
- Sodium hydrate 10%
- Sodium-
- hypochloride 10%
- Sodium-
- sulphate 10%
- Sulphonic acid 10%
- Sulphur
- Synthetic saliva
- Synthetic sweat
- Tartrazine
- Tetracloroethylene
- Tetrahydrothuran
- Tetralin
- Thiocloroacetic acid
- Thrinetic acid
- Triphen
- Toloue
- Tri cresyl phosphate
- Trichlorethylamine
- Trichloroethylene
- Triethanolamine
- Turpentine
- Urea
- Vinyl acetate
- Water
- Xylenes
- Zinc chloride
- Zinc sulphate
- **DETERGENTS**
  - Ajax
  - Bleach
  - Calgonite
  - Dor
  - Feva
  - Horolhit M
  - Impact
  - Into-Fensterklar
  - Laundry soap
  - Natri
  - Omo
  - P3 Aptex
  - Parifex 2%
  - Persil
  - Pril
  - Rapdosept
  - Re
  - Riseptin
  - Sidolin
  - Somat
  - Suwa
  - Tiba
  - Trisilin F
  - WK 60
- **DISINFECTANTS**
  - Baktol
  - Carboxylic Acid
  - Chloramine
  - DDT
  - Delegol
  - Dimamin
  - Hydrogen peroxide 10%
  - Lysoform 2%
  - Maktol
  - Menlen
  - Oktazon 1%
  - Perhydrol
  - Pure alcohol
  - Resorcin 1%
  - Sagrovan 5%
  - Sublimate
  - TB-Lysiform
  - Tincture of iodine
  - Trosilin G extra 1,5%
  - Zephril
- **OILS AND FATS**
  - Aral BG
  - Baysolin
  - BP Enerol
  - Brake liquid
  - Brunofox
  - Camphor oil
  - Combustible oil
  - Darina
  - Diesel oil
  - Drill oil
  - Esso Estic
  - Ether
  - Mobil DTE
  - Molikote
  - Oily paint
  - Paraffin oil
  - Polyra
  - Rheocalor N
  - Shell Spirax 90
  - Shell Tellus 9-0
  - Silicone oil
  - Soy
  - Texano Regal
  - Turpentine oil
- **PHARMACEUTICALS**
  - Ambra solare
  - Blood plasma
  - Conditioner
  - Hydroplex
  - Lanoline
  - Methanol 90%
  - Nailpolish solvent
  - Odol mouthwash
  - Periston
  - Vaseline
  - Wick-Vaporuf

**CHART KEY:** Resistant, Partially resistant, NOT resistant

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The compatibility tests are carried out by immersing the polycarbonate sample piece for 180 days in the substance to be tested at a constant temperature of 20°C. The esthetical aspect (dulling, fissures) is then evaluated and the mechanical characteristics are compared with the original values of the polycarbonate.
### Recommended Loading

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Wall Structure</th>
<th>Maximum Deflection 1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Load (lb./ft²)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15  30  45  60  15  30  45  60  15  30  45  60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2' Width  4' Width  6' Width</td>
</tr>
<tr>
<td>6mm, 1/4&quot;</td>
<td>Twin, Triple</td>
<td>25  21  20  15  18  16  -  -  18  -  -  -</td>
</tr>
<tr>
<td>8mm, 5/16&quot;</td>
<td>Twin, Triple</td>
<td>31  22  18  16  21  17  -  -  20  -  -  -</td>
</tr>
<tr>
<td>10mm, 3/8&quot;</td>
<td>Twin, Triple</td>
<td>98  34  26  23  27  21  19  17  24  21  18  -</td>
</tr>
<tr>
<td>16mm, 5/8&quot;</td>
<td>Five</td>
<td>118  66  36  30  32  24  21  18  29  23  20  18</td>
</tr>
<tr>
<td>25mm, 1&quot;</td>
<td>Five</td>
<td>465  150  126  120  44  32  29  26  37  29  26  19</td>
</tr>
<tr>
<td>32mm, 1-1/4&quot;</td>
<td>Five M</td>
<td>465  197  146  110  50  37  31  28  40  32  29  25</td>
</tr>
<tr>
<td>35mm, 1-3/8&quot;</td>
<td>Five M</td>
<td>465  236  157  118  58  42  34  31  44  33  30  26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Wall Structure</th>
<th>Maximum Deflection 2&quot;</th>
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<tbody>
<tr>
<td></td>
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<td>Load (lb./ft²)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15  30  45  60  15  30  45  60  15  30  45  60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2' Width  4' Width  6' Width</td>
</tr>
<tr>
<td>6mm, 1/4&quot;</td>
<td>Twin, Triple</td>
<td>66  27  23  16  22  17  -  -  20  -  -  -</td>
</tr>
<tr>
<td>8mm, 5/16&quot;</td>
<td>Twin, Triple</td>
<td>65  33  24  18  25  19  -  -  22  -  -  -</td>
</tr>
<tr>
<td>10mm, 3/8&quot;</td>
<td>Twin, Triple</td>
<td>132  67  45  36  34  26  23  21  26  23  20  -</td>
</tr>
<tr>
<td>16mm, 5/8&quot;</td>
<td>Five</td>
<td>177  98  54  41  41  30  26  23  35  27  23  19</td>
</tr>
<tr>
<td>25mm, 1&quot;</td>
<td>Five</td>
<td>465  164  146  133  70  43  37  32  44  35  31  20</td>
</tr>
<tr>
<td>32mm, 1-1/4&quot;</td>
<td>Five M</td>
<td>465  217  162  134  88  50  40  36  49  39  34  27</td>
</tr>
<tr>
<td>35mm, 1-3/8&quot;</td>
<td>Five M</td>
<td>465  297  189  148  108  62  47  41  55  42  37  28</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Wall Structure</th>
<th>Maximum Deflection 3&quot;</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Load (lb./ft²)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15  30  45  60  15  30  45  60  15  30  45  60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2' Width  4' Width  6' Width</td>
</tr>
<tr>
<td>6mm, 1/4&quot;</td>
<td>Twin, Triple</td>
<td>106  32  26  17  26  18  -  -  21  14  -  -</td>
</tr>
<tr>
<td>8mm, 5/16&quot;</td>
<td>Twin, Triple</td>
<td>98  44  30  19  29  21  -  -  23  16  12  -</td>
</tr>
<tr>
<td>10mm, 3/8&quot;</td>
<td>Twin, Triple</td>
<td>165  100  63  49  40  31  27  25  28  25  21  14</td>
</tr>
<tr>
<td>16mm, 5/8&quot;</td>
<td>Five</td>
<td>236  130  71  51  50  36  31  28  40  31  25  20</td>
</tr>
<tr>
<td>25mm, 1&quot;</td>
<td>Five</td>
<td>465  177  165  146  96  54  44  38  51  41  36  21</td>
</tr>
<tr>
<td>32mm, 1-1/4&quot;</td>
<td>Five M</td>
<td>465  236  177  157  126  62  48  44  58  45  39  28</td>
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<tr>
<td>35mm, 1-3/8&quot;</td>
<td>Five M</td>
<td>465  357  221  177  157  82  60  50  65  50  44  29</td>
</tr>
</tbody>
</table>

The information contained in these charts has been drafted on the basis of our best knowledge. CO-EX reserves the right to change specifications and data, without notice, if deemed necessary in the evolution of its products. It is the sole responsibility of the customer to confirm with their own architect, engineer or other professional consultants that the materials offered for sale meet the requirements and specifications of the particular project and use for which they are being purchased.
CO-EX Macrolux Profiles are available to get the best performance from Macrolux sheeting. The U-profile closes the cut edge of the multi-wall sheet while the H, Snap-H and Ridge Profiles make joining simple and efficient.

Rooflite® corrugated sheet provides design professionals, greenhouse growers, and do-it-yourselfers with an easily fabricated and installed building product. Unique physical, mechanical, thermal and optical properties combine to make Rooflite flexible and strong yet light in weight.

The Rooflite MB® panel is designed to match typical metal building profiles in both 9" and 12" patterns, so it easily creates skylights and sidelights. Rooflite MB features all the benefits of our standard Rooflite corrugated panels.

CO-EX’s BDL® is a system of standing seam modular panels used to create vertical and sloped glazing. It is suited for a range of applications from curved skylights to interiors. Thanks to its variety of accessories, the system is complete, versatile, lightweight and easy to install.

CO-EX MODULIT 500 LP® system is suitable for any translucent glazing application such as clerestory glazing, external translucent walls and internal translucent partitions.

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