



# Makrolon® TX sheet

## Extended weatherability transportation glazing

Makrolon® TX sheet is a hard-coated polycarbonate product designed to meet demanding transportation glazing applications. The sheet provides high impact performance at half the weight of the glass. The advanced hard coat technology provides extended outdoor weathering properties and significantly enhances abrasion and chemical resistance. Makrolon TX meets DOT/ANSI Z26.1 Item AS-4 and is available in clear, as well as a variety of standard and custom tints.

## Applications

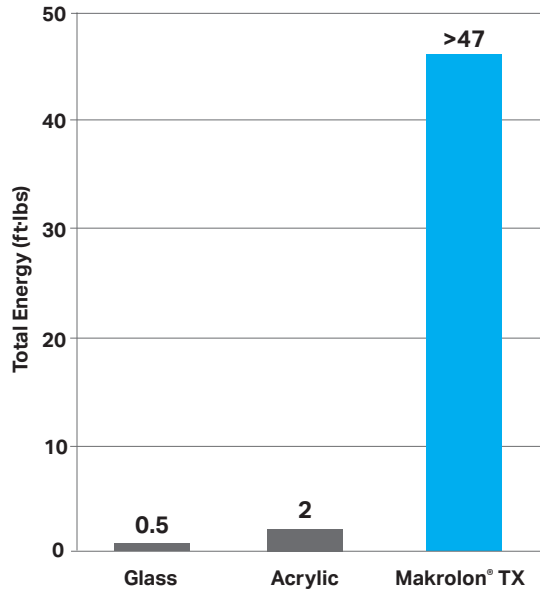
Truck cabs, automotive roofs, and other transportation glazing

| Typical Properties*   |             |           |                         |
|---|-------------|-----------|-------------------------|
| Property  | Test Method | Units     | Values                  |
| <b>PHYSICAL</b>   |             |           |                         |
| Specific Gravity  | ASTM D 792  | -         | 1.2                     |
| Light Transmission, Clear 0.250"                                    | ASTM D 1003 | %         | 84                      |
| Chemical Resistance   | ASTM D 1308 | -         | Pass                    |
| Taber Abrasion, 100 Cycles, Delta Haze<br>CS-10F Wheel @ 500 g load | ASTM D 1044 | %         | 2                       |
| <b>MECHANICAL</b>   |             |           |                         |
| Tensile Strength, Ultimate  | ASTM D 638  | psi       | 9,500                   |
| Tensile Modulus   | ASTM D 638  | psi       | 340,000                 |
| Flexural Strength   | ASTM D 790  | psi       | 13,500                  |
| Izod Impact Strength, Notched @ 0.125"                              | ASTM D 256  | ft-lbs/in | 16                      |
| Izod Impact Strength, Unnotched @ 0.125"                            | ASTM D 256  | ft-lbs/in | No Break                |
| Instrumented Impact @ 0.125"  | ASTM D 3763 | ft-lbs    | >47                     |
| <b>THERMAL</b>  |             |           |                         |
| Coefficient of Thermal Expansion                                    | ASTM D 696  | in/in/°F  | 3.75 x 10 <sup>-5</sup> |
| Heat Deflection Temperature @ 264 psi                               | ASTM D 648  | °F        | 270                     |
| Heat Deflection Temperature @ 66 psi                                | ASTM D 648  | °F        | 280                     |
| <b>FLAMMABILITY</b>   |             |           |                         |
| Horizontal Burn, AEB  | ASTM D 635  | in        | <1                      |
| Ignition Temperature, Self  | ASTM D 1929 | °F        | 1022                    |
| Ignition Temperature, Flash   | ASTM D 1929 | °F        | 824                     |

\*Typical Properties are for reference only

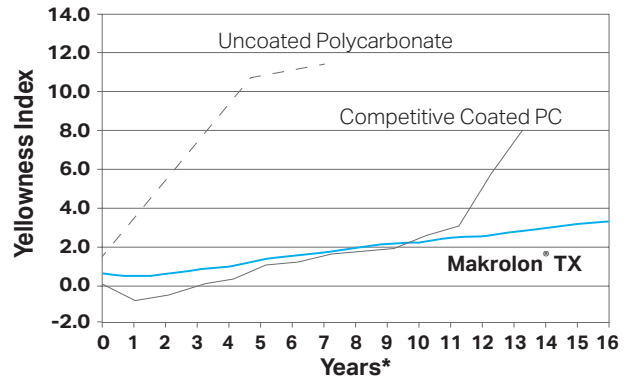
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## Impact Resistance\*



\*Instrumented Impact per ASTM D 3763, sample thickness 0.125" nominal

## Weather Behavior in Vertical Orientation



\*Based upon Xenon WOM accelerated weathering for UV dose at mid-latitude location

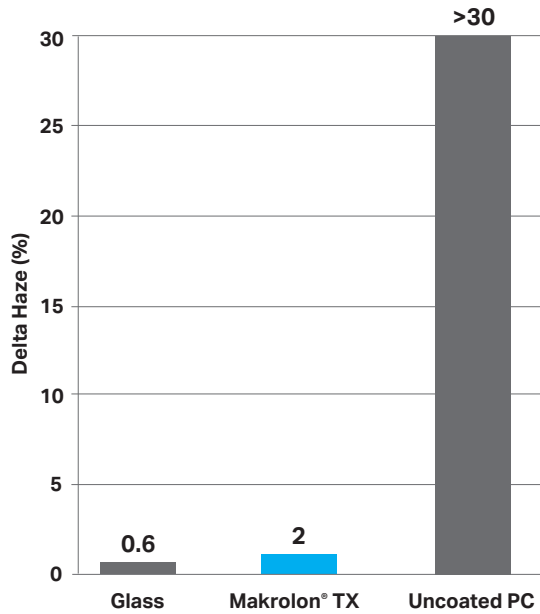
## Chemical Resistance\*

| Chemical Tested                 | Resistance Time |
|---------------------------------|-----------------|
| Acetone                         | >24 hrs         |
| Ammonia (10% concentration)     | >24 hrs         |
| Antifreeze (50/50)              | >24 hrs         |
| Benzene                         | >24 hrs         |
| Bleach (Clorox concentrated)    | >24 hrs         |
| Chloroform                      | >24 hrs         |
| Denatured Alcohol               | >24 hrs         |
| Di (2-ethylhexyl) phthalate     | >24 hrs         |
| Diesel Oil                      | >24 hrs         |
| Isopropyl Alcohol (IPA)         | >24 hrs         |
| Kerosene                        | >24 hrs         |
| Methyl Alcohol                  | >24 hrs         |
| Methyl Butyl Ketone             | >24 hrs         |
| Methyl Ethyl Ketone             | >24 hrs         |
| Methylene Chloride              | >24 hrs         |
| Naphthalene, 1-bromo-           | >24 hrs         |
| Potassium Hydroxide - Lye (10%) | >24 hrs         |
| Sodium Hydroxide (10%)          | >24 hrs         |
| Toluene                         | >24 hrs         |
| Turpentine                      | >24 hrs         |
| Unleaded Gasoline (87 Octane)   | >24 hrs         |
| Vinegar                         | >24 hrs         |
| Xylene                          | >24 hrs         |
| <b>Acids:</b>                   |                 |
| Hydrochloric Acid (20%)         | >24 hrs         |
| Nitric Acid (20%)               | >24 hrs         |
| Sulfuric Acid (20%)             | >24 hrs         |

\*Tested in accordance to ASTM D 1308-02

Always keep hazardous chemicals away from uncoated edge of Makrolon Polycarbonate

## Abrasion Resistance\*



\*Taber Abrasion per ASTM D 1044, 100 cycles, CS-10F wheel



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