



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

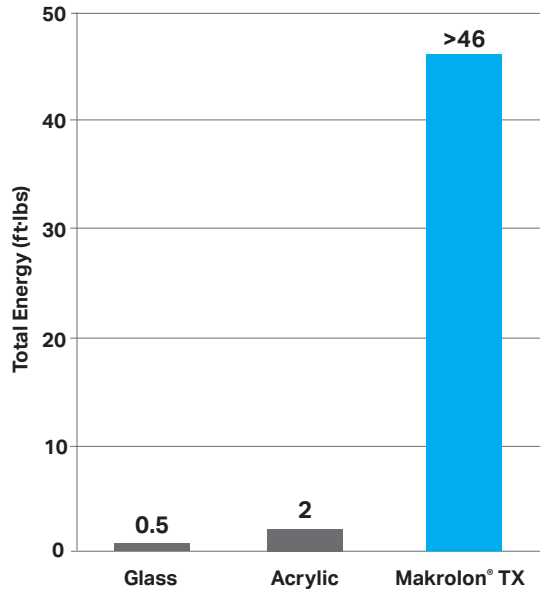
Truck cabs, automotive roofs, and other transportation glazing

Typical Properties*			
Property	Test Method	Units	Values
PHYSICAL			
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 CS-10F Wheel @ 500 g load	ASTM D 1044	%	2
MECHANICAL			
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	>46
THERMAL			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 ⁻⁵
Heat Deflection Temperature @ 264 psi	ASTM D 648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D 648	°F	280
FLAMMABILITY			
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

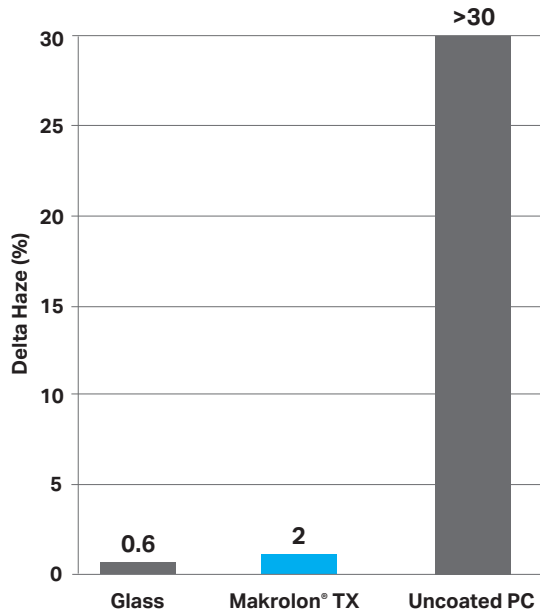
Makrolon® TX sheet

Impact Resistance*



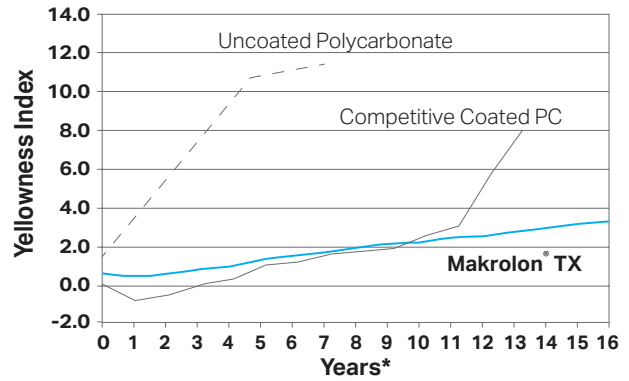
*Instrumented Impact per ASTM D 3763, sample thickness 0.125" nominal

Abrasion Resistance*



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

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
Acids:	
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



119 Salisbury Road
 Sheffield, MA 01257
 Toll Free: 800.254.1707
 Fax: 800.457.3553
sfdinfo@covestro.com
sheets.covestro.com

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by Covestro.

Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

With respect to health, safety and environment precautions, the relevant Material Safety Data Sheets (MSDS) and product labels must be observed prior to working with our products.