

# PLASKOLITE

## TUFFAK® POLYCARBONATE SHEET

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### PRODUCT GUIDE



# TUFFAK POLYCARBONATE SHEET PRODUCTS

## ...TECHNOLOGY ADAPTED TO THE PERFORMANCE & AESTHETIC DEMANDS OF SPECIFIC INDUSTRIES

### ABOUT THIS GUIDE

Designed as a quick reference tool, this guide summarizes the main features, differences, and applications for TUFFAK sheet products.

**Organized by industries**, it shows typical applications for each product. Products with broader uses are listed in several industry categories.

**For complete information** on properties, warranty and agency compliance, visit [www.plaskolite.com](http://www.plaskolite.com)

### Information under column headings

**TUFFAK Grade** lists formal product designations for ordering and referencing.

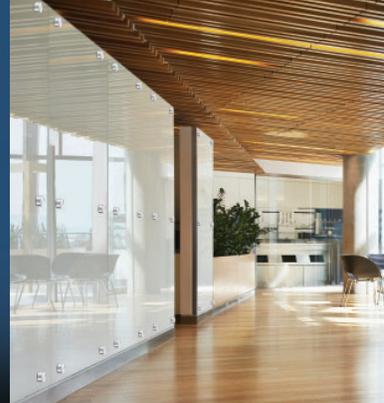
**Key Product Features** describes each product's key attributes and helps differentiate products from each other.

**Typical Applications** describes the most common uses for each product in the industry.

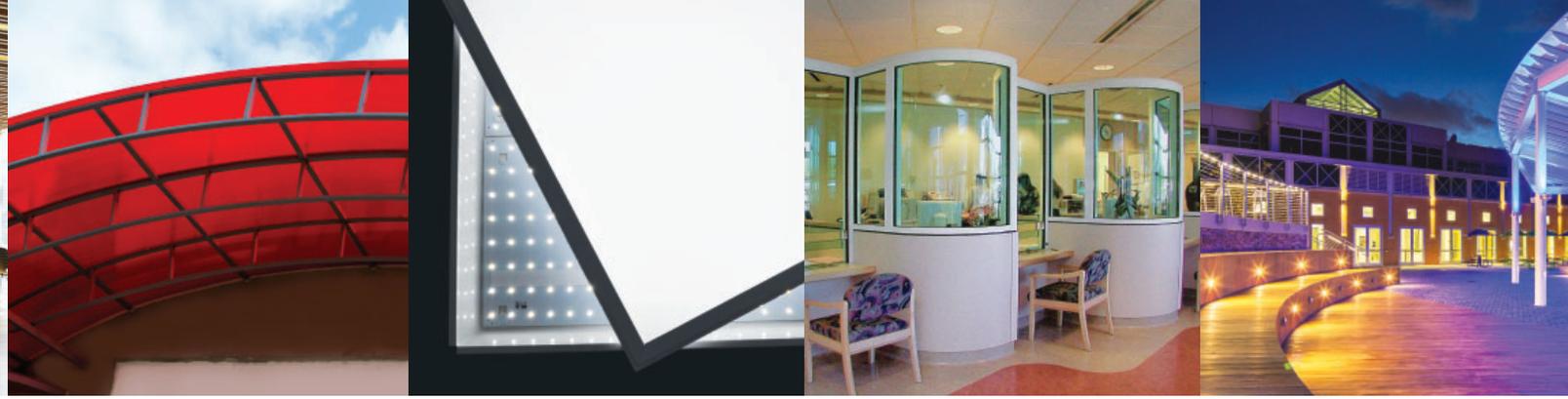
| TUFFAK Grade | Key Product Features                            | Typical Applications   |
|--------------|---|--|
| GP           | High impact; clarity; and temperature resistant | Industrial glazing, machine guards, structural parts, thermoformed and fabricated components   |
| GP Patterns  | Pebble, matte and prismatic surface finishes    | Industrial glazing, privacy glazing, signs, displays and lighting covers   |
| OP           | Optical Quality                                 | Face shields, laminates  |
| FI           | UL 94 V-0, 5VA; FAA rated; not UV stabilized    | Electrical devices, equipment housings, switch-gear covers, and interior aircraft components   |
| LF           | UL 94 V-0; FAA rated; has UV stabilizer         | Electrical devices, equipment housings, switchgear covers, light fixtures, aerospace components  |
| FD           | FDA/NSF compliant for food contact              | Machine guards, bulk food bins, candy molds, sneeze guards, hospital trays, bassinets, incubators, and medical device storage containers |



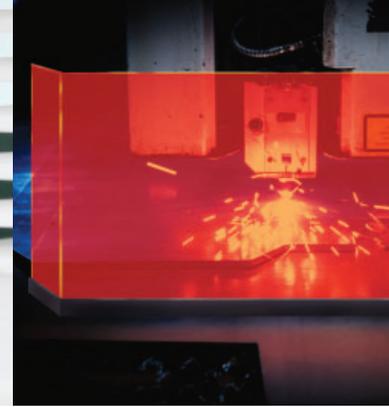
| TUFFAK Grade | Key Product Features   | Typical Applications   |
|--------------|--|--|
| SL           | Enhanced outdoor weathering performance  | Flat and formed sign faces and channel letters   |
| SL Matte     | Enhanced outdoor weathering performance with matte texture   | Flat and formed sign faces, channel letters and digital displays   |
| LD           | LED light diffusion; enhanced outdoor weathering performance   | Flat and formed sign faces and channel letters using LEDs  |
| NR           | Non-reflective; UV resistant; proprietary matte surface; impact strength   | Display and screen protection, signage, lenses, and menu boards with reduced glare   |
| NR-C         | Non-reflective; UV resistant; one side hard-coated; textured surface with improved chemical resistance and reduced glare | Display and screen protection, fuel dispensing systems, signage, lenses, and menu boards   |
| UV           | High optical quality; enhanced outdoor weathering performance and can be cold formed on site                             | Covered pedestrian walkways, entryway canopies, awnings, skylights, barrel vaults, glazed archways, and sloped, vertical, and curved glazing |
| SK           | Smooth and prismatic pattern designed as inner lite of a dual domed skylight   | Awning, skylights, entryway canopies, barrel vaults, sloped, vertical and curved glazing   |
| SK1 & SK1 HD | Smooth and prismatic optimized to diffuse and distribute light with high light transmission; UV resistant                | Awning, skylights, entryway canopies, barrel vaults, sloped, vertical and curved glazing   |
| SK1 CC       | Advanced IR blocking to reduce solar heat gain, maximizing visible light transmission; UV resistant                      | Awning, skylights, entryway canopies, barrel vaults, sloped, vertical and curved glazing   |



| <b>TUFFAK Grade</b> | <b>Key Product Features</b>   | <b>Typical Applications</b>  |
|---------------------|---|--|
| <b>AR</b>           | Long lasting abrasion and chemical resistance, and outdoor weathering performance   | Replacement glazing, industrial guarding, safety components  |
| <b>15</b>           | Long lasting abrasion and chemical resistance, and outdoor weathering performance; Fifteen (15) year limited product warranty               | Architectural glazing for residential, retail, transportation centers, psychiatric facilities  |
| <b>AMGARD</b>       | AMGARD formulated with silver ion antimicrobial agent to protect against surface microorganism growth; tested to ISO 22196                  | Safety shields and barriers  |
| <b>AMGARD SR</b>    | AMGARD formulated with silver ion antimicrobial agent to protect against surface growth with scratch resistant coating; tested to ISO 22196 | Scratch resistant safety shields and barriers  |
| <b>CA</b>           | Optical grade, UV stable sheet meeting ICB Class A flammability; passes NFPA 286  | Wall cladding, ceiling finishes and decorative panels  |
| <b>CA-UV</b>        | Optical grade, UV enhanced sheet meeting ICB Class A flammability; passes NFPA 286  | Exterior glazing and canopies  |
| <b>CA-AR</b>        | Abrasion resistant enhanced meeting IBC Class A flammability, passes NFPA 286   | Flat architectural glazing, bus shelters, protective wall cladding, partitions and safety barriers   |
| <b>AF</b>           | Two-sided coated product with Anti-Fog properties; meets ANSI Z87.1 (2020)  | Personal protection safety shields, ski goggles, swim goggles, underwater photography equipment, face shields, industrial safety shields and firefighter helmets |



| TUFFAK Grade               | Key Product Features  | Typical Applications  |
|----------------------------|---|---|
| <b>FC</b>                  | Cold formable and drape formable; meets ANSI Z26 .1 AS-6  | Motorcycle and recreational vehicle windscreens, face shields, and formed applications            |
| <b>CG375, CG500, CG750</b> | Meets ASTM F 1915; ASTM F 1233; H.P. White TP 0500  | Jails, prisons, detention and psychiatric containment glazing                                     |
| <b>BR750</b>               | Meets UL 752 Level 1  | Ballistic resistant glazing for government, institutional and commercial installations            |
| <b>BR1000</b>              | Meets UL 752 Level 2; ASTM F 1233; ASTM F 1915; H.P. White TP 0500                                  | Ballistic resistant glazing for government, institutional, banks and commercial installations     |
| <b>BR1250</b>              | Meets UL 752 Level 3; NIJ Level II, IIIA; ASTM F 1233; ASTM F 1915; H.P. White TP 0500              | Ballistic resistant glazing for government, institutional, banks and and commercial installations |
| <b>MS1250</b>              | Meets UL 752 Level 6 rating; multi-shot 9 mm (Uzi) ballistic attack and supplementary shotgun       | Ballistic resistant glazing for severe threat   |
| <b>Lumen XT</b>            | Superior LED and conventional light diffusion; wide range of diffusion levels; meets UL 94 V-0, 5VA | Interior LED and conventional lighting fixtures   |
| <b>Lumen XT-V</b>          | Superior LED and conventional light diffusion; wide range of diffusion levels; meets UL 94 V-0, 5VA | Interior LED and conventional lighting fixtures   |
| <b>DX-NR</b>               | Specifically formulated for superior LED light diffusion with enhanced weathering performance       | Exterior LED and conventional lighting fixtures   |



| TUFFAK Grade | Key Product Features  | Typical Applications  |
|--------------|---|---|
| <b>IR</b>    | Meets welding shades 3 and 5; complies with ANSI Z87.1, EN 169: CSA Z94.3   | Face shields for flame welding and cutting, general IR protection, welding curtain  |
| <b>LS</b>    | Available in IR, Visible and UV laser blocking tints; certified to ANSI Z136.7  | Door and room windows, standing panels and screens, modular barriers and enclosures where reflective laser light blocking is required |
| <b>WC</b>    | Effectively blocks 100% of harmful UV light, hazardous blue-light, a common cause of “welder arc-eye”; complies with AWS F2:3M:2011 | Welding curtains, screens, booths, enclosures and walkways, tanning salons screens and other high UV and visible lighted areas        |
| <b>MG</b>    | 0.750” – 2.0” thick for machining, textured surface   | Machined parts such as manifolds, insulators, diaphragms, electrical, semiconductor, military applications                            |
| <b>WG</b>    | 0.750” – 2.0” thick, transparent  | Sight windows for tanks/vessels, viewports, medical parts, military applications  |
| <b>AU</b>    | UV and abrasion resistant; ultra-clear; high visible light transmission   | Specialty laminates   |
| <b>UC</b>    | High light transmission; and high optical quality   | Military aircraft canopies, specialty laminates   |
| <b>SQ</b>    | High optical quality  | High optical quality with specifications tailored to end-use application  |
| <b>HV</b>    | UV and abrasion resistant; high optical quality thick gauge sheet; meets ANSI Z26.1 AS-4  | Forestry equipment, agricultural and industrial vehicle glazing   |



| <b>TUFFAK Grade</b> | <b>Key Product Features</b>  | <b>Typical Applications</b>  |
|---------------------|--|--|
| <b>TX</b>           | Extended UV and abrasion resistant glazing for windows; meets ANSI Z26.1 AS-4 and FMVSS 302  | RV, construction, and commercial truck rear windows                        |
| <b>BG</b>           | UV and abrasion resistant; optical performance meets ANSI Z26.1 AS-4 and FMVSS 302   | Bus window glazing   |
| <b>DG</b>           | High optics, abrasion resistant for driver guard; conforms to FMVSS 205/ANSI Z26.1. AS4  | Transportation approved glazing for use as protective bus driver surrounds |
| <b>TG</b>           | High optical performance with enhanced UV and abrasion resistance; meets FRA 49 CFR 223 & 49 CFR 238 for flammability, smoke, ballistics, and impact | Passenger rail car glazing   |
| <b>Marine 5</b>     | High optical clarity; low optical distortion; UV, abrasion, and chemical resistant   | Marine flexible enclosures, tent and awning enclosures                     |
| <b>VR</b>           | High optical quality; low optical distortion; high clarity; enhanced UV resistance   | Marine flexible enclosures, tent and awning enclosures                     |
| <b>AL</b>           | High optical quality; abrasion, chemical and UV resistant  | Automotive laminates   |

# PLASKOLITE

**A GLOBAL LEADER IN THE PRODUCTION OF THERMOPLASTIC SHEET**

**FOUNDED IN 1950**

Our Mission: to deliver superior thermoplastic sheet, coatings and polymers to the world, through long-lasting customer relationships and hands-on customer service.

## MANUFACTURING LOCATIONS



From our founding, PLASKOLITE strives to treat our employees, our customers, our community and the world, with kindness, dignity and respect. This drives our continuing effort to create sustainable products, in a sustainable manner, for future generations. This on-going commitment is expressed in the

### **PLASKOLITE Sustainable Ecosystem:**

### **QUICK FACTS**

**STATUS:** Privately held

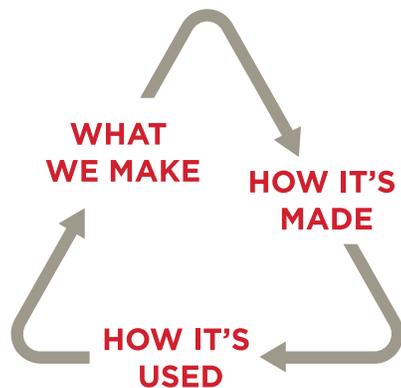
**GLOBAL HEADQUARTERS:** Columbus, OH

**EMPLOYEES:** 1900 Worldwide

**MARKETS SERVED:** Signage, Lighting, Retail Display, Construction, Transportation, Security, Bath & Spa, Industrial, Architecture, Green Houses

## OUR PILLARS OF SUSTAINABILITY

**EACH CONTRIBUTES TO MAKING THE WORLD A BETTER PLACE**



### **WHAT WE MAKE**

Versatile, high-quality, durable thermoplastic materials...not single-use plastics

### **HOW IT'S MADE**

How we make our products reflects our overall philosophy of continuous environmental improvement

### **HOW IT'S USED**

Our thermoplastics play an important role in advancing human well-being, energy conservation and quality of life

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.