



TUFFAK Grade	Key Product Features	Typical Applications
<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>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>TG</b>	High optical performance with enhanced UV and abrasion resistance; meets FRA 49 CFR 233 & 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	Marine flexible enclosures, tent and awning enclosures
<b>Bayblend® MTR</b>	Opaque sheet for mass transit interiors. Meets FRA 49 CFR 238 standards for flame and smoke; meets SMP-800C toxic gas generation	Thermoformed rail interior parts such as structural seating components, wall cladding, window reveals, ceiling panels
<b>Bayblend MTR AG</b>	Opaque sheet with anti-graffiti, scratch, and stain resistance; meets FRA 49 CFR 238 standards for flame and smoke; meets SMP-800C toxic gas generation	Thermoformed rail interior parts such as structural seating components, wall cladding, window reveals, ceiling panels
<b>Bayblend MTR AG Deco</b>	Opaque sheet with anti-graffiti, scratch and stain resistance customizable first service print. Meets FRA 49 CFR 238 standards for flame and smoke; meets SMP-800C toxic gas generation	Thermoformed rail interior parts such as structural seating components, wall cladding, window reveals, ceiling panels
<b>FP</b>	Long lasting abrasion, chemical and outdoor weathering performance; customizable edge fritting	Heavy equipment cab safety glazing, marine and mass transit glazing
<b>AL</b>	High optical quality; abrasion, chemical and UV resistant	Automotive laminates

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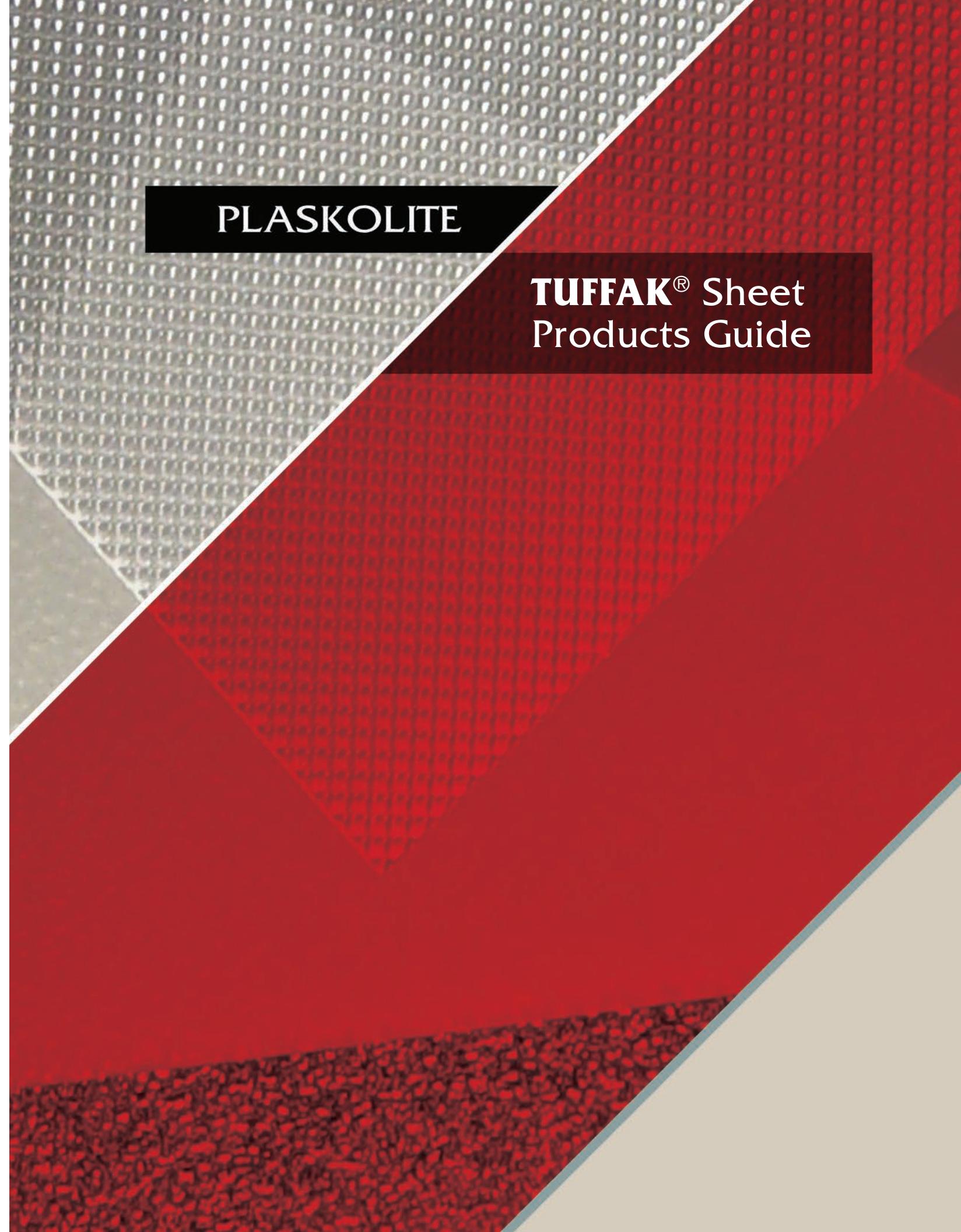
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BRO035



# TUFFAK polycarbonate sheet products

...Technology adapted to the performance and 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)

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, switchgear 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 compliant for food contact	Machine guards, bulk food bins, candy molds, sneeze guards, hospital trays, bassinets, incubators, and medical device storage containers
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

TUFFAK Grade	Key Product Features	Typical Applications
NR	Non-reflective; UV resistant; proprietary matte surface; impact strength	Display and screen protection, signage, lenses, and menu boards
NR-C	Non-reflective; UV resistant; one side hard-coated; textured surface	Display and screen protection, fuel dispensing systems, signage, lenses, and menu boards with improved chemical resistance
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	Designed as inner light of a dual domed skylight	Awning, skylights, entryway canopies, barrel vaults, sloped, vertical and curved glazing
SKI	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
multi UV	Light weight; high structural strength; multiple geometries for different structural and insulating properties	Greenhouses, solariums and atriums, covered walkways, insulative privacy glazing
AR	Long lasting abrasion and chemical resistance, and outdoor weathering performance	Replacement glazing, industrial guarding, safety components
15	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
FC	Cold formable and drape formable; meets ANSI Z26.1 AS-6	Motorcycle and recreational vehicle windscreens, face shields, and formed applications
CG375, CG500, CG750	Meets ASTM F 1915; ASTM F 1233; H.P. White TP 0500	Jails, prisons, detention and psychiatric containment glazing
BR750	Meets UL 752	Ballistic resistant glazing for government, institutional and commercial installations
BR1000	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
BR1250	Meets UL 752 Level 3; NIJ Level II; ASTM F 1233; ASTM F 1915; H.P. White TP 0500	Ballistic resistant glazing for government, institutional, banks and commercial installations
MS1250	Meets UL 752 Level 6	Ballistic resistant glazing for severe threat
Lumen XT	Superior LED and conventional light diffusion; wide range of diffusion levels	Interior LED and conventional lighting fixtures
Lumen XT-V	Meets UL 94 V-0, 5VA	Interior LED and conventional lighting fixtures
DX-NR	Specifically formulated for superior LED light diffusion with enhanced weathering performance	Exterior LED and conventional lighting fixtures
IR	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
MG	0.750" - 2.0" thick for machining, textured surface	Machined parts such as manifolds, insulators, diaphragms, electrical, semiconductor, military applications
WG	0.750" - 2.0" thick, transparent	Sight windows for tanks/vessels, viewports, medical parts, military applications
AU	UV and abrasion resistant; ultra clear; high visible light transmission	Specialty laminates
UC	High light transmission; and high optical quality	Military aircraft canopies, specialty laminates
SQ	High optical quality	High optical quality with specifications tailored to end-use application

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OP	Optical Quality	Face shields, laminates
FI	UL 94 V-0, 5VA; FAA rated; not UV stabilized	Electrical devices, equipment housings, switchgear 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 compliant for food contact	Machine guards, bulk food bins, candy molds, sneeze guards, hospital trays, bassinets, incubators, and medical device storage containers
SL	Enhanced outdoor weathering performance	Flat and formed sign faces and channel letters
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TUFFAK Grade	Key Product Features	Typical Applications
NR	Non-reflective; UV resistant; proprietary matte surface; impact strength	Display and screen protection, signage, lenses, and menu boards
NR-C	Non-reflective; UV resistant; one side hard-coated; textured surface	Display and screen protection, fuel dispensing systems, signage, lenses, and menu boards with improved chemical resistance
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 light of a dual domed skylight	Awning, skylights, entryway canopies, barrel vaults, sloped, vertical and curved glazing
SK1	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
AR	Long lasting abrasion and chemical resistance, and outdoor weathering performance	Replacement glazing, industrial guarding, safety components
15	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
FC	Cold formable and drape formable; meets ANSI Z26.1 AS-6	Motorcycle and recreational vehicle windscreens, face shields, and formed applications
CG375, CG500, CG750	Meets ASTM F 1915; ASTM F 1233; H.P. White TP 0500	Jails, prisons, detention and psychiatric containment glazing
BR750	Meets UL 752 Level 1	Ballistic resistant glazing for government, institutional and commercial installations
BR1000	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
BR1250	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 commercial installations
MS1250	Meets UL 752 Level 6 rating; multi-shot 9 mm (Uzi) ballistic attack and supplementary shotgun	Ballistic resistant glazing for severe threat
Lumen XT	Superior LED and conventional light diffusion; wide range of diffusion levels	Interior LED and conventional lighting fixtures
Lumen XT-V	Meets UL 94 V-0, 5VA	Interior LED and conventional lighting fixtures
DX-NR	Specifically formulated for superior LED light diffusion with enhanced weathering performance	Exterior LED and conventional lighting fixtures
IR	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 curtains
MG	0.750" - 2.0" thick for machining, textured surface	Machined parts such as manifolds, insulators, diaphragms, electrical, semiconductor, military applications
WG	0.750" - 2.0" thick, transparent	Sight windows for tanks/vessels, equipment, medical parts, military applications
AU	UV and abrasion resistant; ultra clear; high visible light transmission	Specialty laminates
UC	High light transmission; and high optical quality	Military aircraft canopies, specialty laminates
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SK	Smooth and prismatic pattern designed as inner light of a dual domed skylight	Awning, skylights, entryway canopies, barrel vaults, sloped, vertical and curved glazing
SKI	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
AR	Long lasting abrasion and chemical resistance, and outdoor weathering performance	Replacement glazing, industrial guarding, safety components
15	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
FC	Cold formable and drape formable; meets ANSI Z26.1 AS-6	Motorcycle and recreational vehicle windscreens, face shields, and formed applications
CG375, CG500, CG750	Meets ASTM F 1915; ASTM F 1233; H.P. White TP 0500	Jails, prisons, detention and psychiatric containment glazing

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TUFFAK Grade	Key Product Features	Typical Applications
BR750	Meets UL 752 Level 1	Ballistic resistant glazing for government, institutional and commercial installations
BR1000	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
BR1250	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 commercial installations
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<b>BG</b>	UV and abrasion resistant; optical performance meets ANSI Z26.1 AS-4 and FMVSS 302	Bus window glazing
<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

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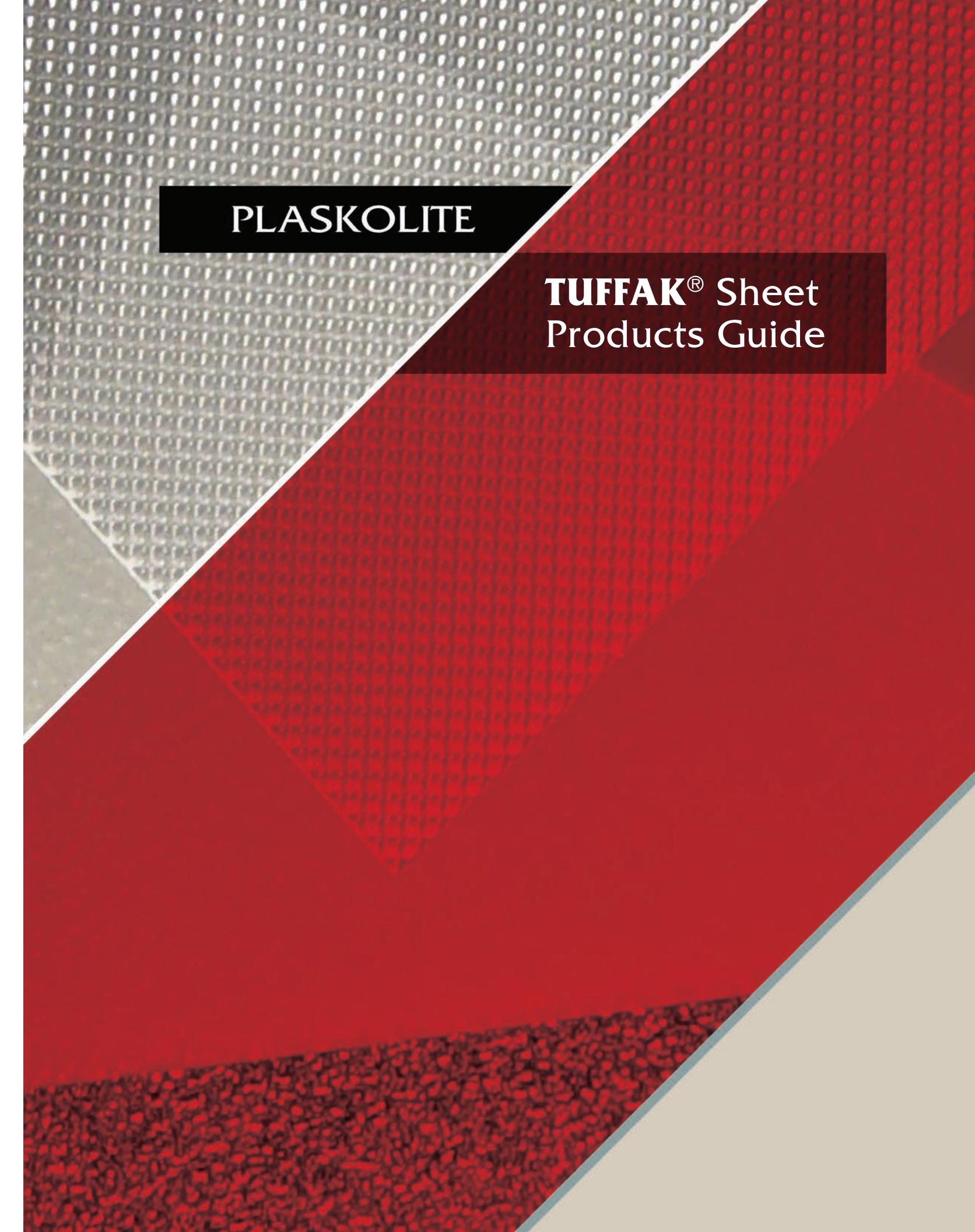
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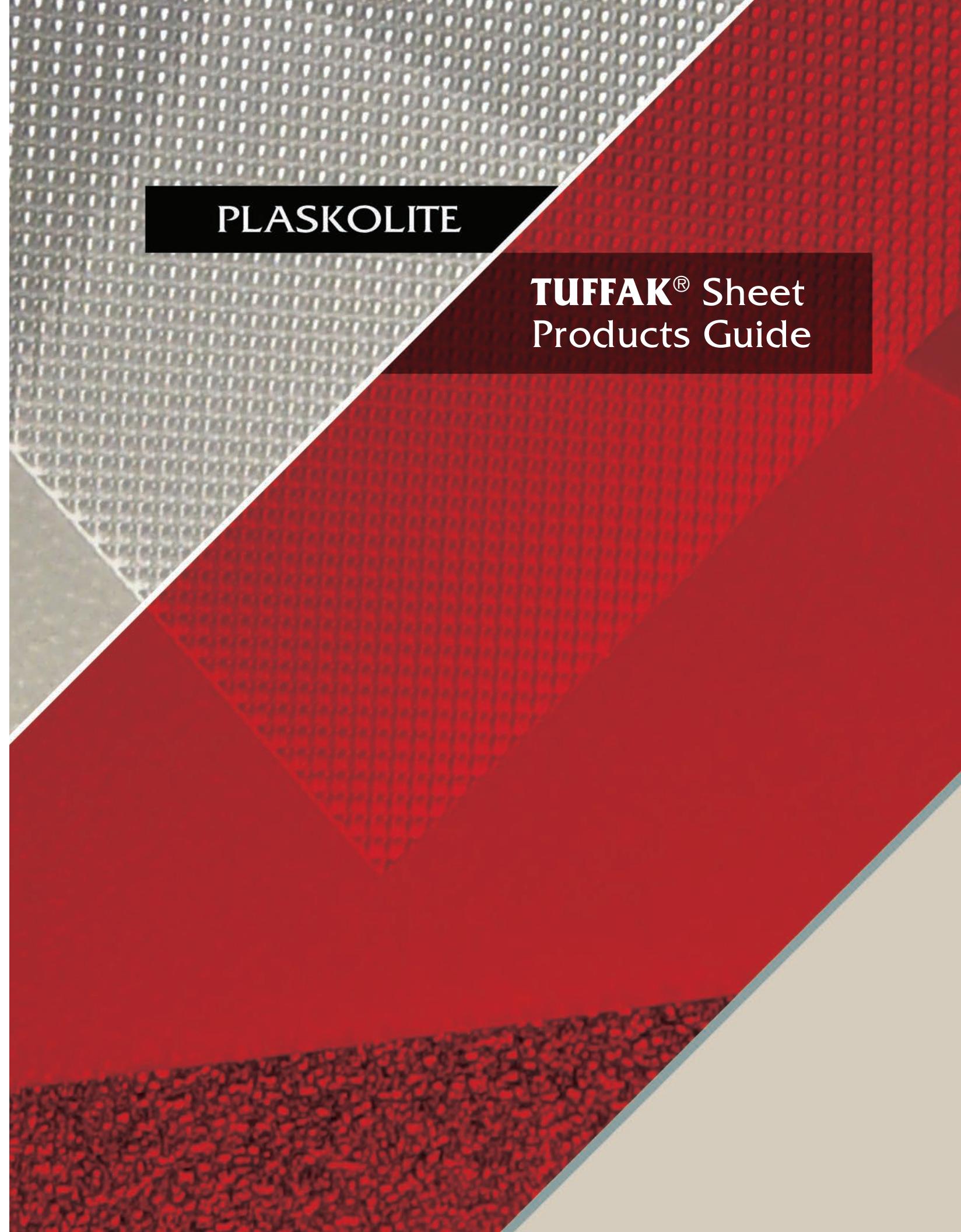
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