Nova Polymers

NOVACRYL® PHOTOPOLYMER SPECIFICATIONS

Company Overview

Photopolymer has long been the industry standard for ADA-compliant wayfinding signs. As the largest manufacturer of the only ADA-focused sign fabrication system, Nova Polymers provides the materials, equipment and support needed to make 100% ADA-compliant photopolymer signage.

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Novacryl® Substrates Overview



EX™ Series:
Exterior Grade
Outdoor & Tough Interior Climates



PG™ Series:
PermaGlow
Glow-in-the-Dark Substrate



LP™ Series:
Laminated Series
Woodgrain, Stone, Gradients, Patterns



PT™ Series:
Clear, White or Black
PETG



AC™ Series:
Clear Acrylic



AL™ Series:
Aluminum
Powdered Appearance



BR™ Series:
Brushed Aluminum
A Sleek, Satin-like Metal Appearance



ECR™ Series:
3form Varia EcoResin
Encapsulated Natural Plants

Novacryl® EX™ Series: *For building exteriors and* ***non-climate controlled indoor spaces*** *that have high humidity and moisture, the exterior grade photopolymer substrate provides a 0% swell rate.*

Composition	Consists of a UV sensitive .032" (.8 mm) exterior grade photopolymer layer bonded on a aluminum alloy base. All Novacryl EX material must have a topcoat of acrylic polyurethane to ensure protection from cleaning agents, UV, and moisture. Exterior and interior application.
Base Thickness	.016 inch (0.4 mm) thick brushed aluminum alloy base
Product Certifications	SAE J1960/J2527 (SEP2017) Weatherability Testing

Novacryl® PG™ Series: *The PermaGlow 250™* ***glow-in-the-dark*** *Series absorbs ambient light to provide photoluminescent guidance in the dark – the ideal solution for your ADA safety and egress signage needs. UL 1994 listed product.*

Composition	Consist of a UV sensitive .032" (.8 mm) moisture resistant nylon photopolymer layer bonded on a 250/22 photoluminescent PVC base. Interior application only.
Base Thickness	0.047 inch thick photo luminescent rigid PVC
Product Certifications	Complies with applicable provisions of ASTM E 2073-02 and DIN 67510 *Photoluminescent material must have up to eight hours of luminosity.*

Novacryl® LP™ Series: *A clear photopolymer layer, extruded to a patterned laminate base giving sign designers the freedom to choose from a wide range of* ***wood grains, stones, marbles, granites, and gradients*** *on top of hundreds of colors and patterns.*

Composition	Consists of UV sensitive .032" (.8 mm) moisture resistant nylon photopolymer layer bonded on Formica, Pionite, Wilsonart

	laminates. Interior application only.
Base Thickness	0.118 inch (3.0 mm)

Novacryl® PT™ Series - White PETG or Black PETG: *The most **versatile** line of photopolymer substrates that can help you save on lead time and production costs.*

Novacryl® PT™ Series - Clear PETG: *Clear also provides the opportunity for 1st and 2nd surface painting, second surface UV printing or vinyl applications.*

Composition	Consists of a UV sensitive .032" (.8 mm) moisture resistant nylon photopolymer layer bonded on a UV resistant PETG base. Interior application only.
Base Thickness	**Gloss**: 0.020 inch (0.5 mm), 0.375 inch (9.5 mm) **Non Glare:** 0.040 inch (1.0 mm), 0.060 inch (1.5 mm), 0.080 inch, (2.0 mm), 0.118 inch (3.0 mm), 0.190 inch (4.8 mm), 0.236 inch (6.0 mm)
Product Certifications	Intertek Clean Air GOLD Certified *Minimum 20 percent pre-consumer recycled content.*

Novacryl® AC™ Series: *The clear acrylic photopolymer substrate posesses great laser cutting qualities while also providing the opportunity for1st and 2nd surface painting, second surface UV printing or vinyl applications.* ***Preferred substrate when using light colored paint and 2nd surface color application.***

Composition	Consist of a UV sensitive .032" (.8 mm) moisture resistant nylon photopolymer layer bonded on a UV resistant acrylic base. Interior application only.
Base Thickness	**Non Glare:** 0.060 inch (1.5 mm), 0.118 inch (3 mm), or 0.236 inch (6 mm)

Novacryl® AL™ Series: *A **powdered look** aluminum backed photopolymer that provides a modern, sleek appearance.*

Composition	Consists of a UV sensitive .032" (.8 mm) moisture resistant nylon photopolymer layer bonded on aluminum alloy base. Interior application only.
Base Thickness	0.017 inch (0.4 mm) thick brushed aluminum alloy base.

Novacryl® BR Series: *A **brushed aluminum** backed photopolymer that provides a classic, satin-like metal ADA sign appearance.*

Composition	Consists of UV sensitive .032" (.8 mm) moisture resistant nylon photopolymer layer bonded on brushed aluminum alloy base. Interior application only.
Base Thickenss	0.118 inch (3.0 mm)

Novacryl® ECR™: *3form Varia EcoResin backed photopolymer for decorative ADA signs featuring a wide selection of **natural plant patterns, textures, and finishes.***

Composition	Consists of a UV sensitive 0.032 inch (0.8 mm) moisture resistant, nylon photopolymer layer bonded on 3form Varia Ecoresin ECT.
Base Thickness	Determined by the 3form Varia Ecoresin pattern. Gauge not to exceed 0.0250 inch (6.35 mm) Non Glare.
Product Certifications	Varia ecoresin panels contain a minimum of 20 percent recycled content and are SCS certified (except River Rock Organics, 0.126 gage wire mesh insert, and 0.0625 gage color film inserts). Varia ecoresin panels are Greenguard certified indoor air quality.

Polymer Substrate Specifications

Key Features	• PT Clear or Clear Acrylic (AC) can be first-surface and/or second-surface painted or clear coated. • UV inhibitor to extend sign life. • Shatterproof. • High chemical resistance. • Grade II Braille. • Both Federal and California Title 24 compliant.
Mechanical Properties	• Tensile Strength per ASTM D638: 7,700 psi. • Tensile Modulus of Elasticity per ASTM D790: 320,300 psi. • Flexural Strength per ASTM D790: 11,200 psi. • Flexural Modulus of Elasticity per ASTM D790: 10,000 psi. • Izod Impact Strength Molded - Milled Notch per ASTM D256: 1.7 Ft-lb per inch Notch. • Rockwell Hardness per ASTM D785: R-115. • Drop Dart Impact per ASTM D3763: 22 ft-lbs. • Shear Strength per ASTM D732: 9,000 psi. • Compressive Strength per ASTM D695: 8,000 psi.
Electrical Properties	• Dielectric Constant at 1KHz ASTM D150: 2.6. • Dielectric Constant at 1MHz ASTM D150: 2.4. • Dielectric Strength ASTM D149: 410 Volts per mil.
Thermal Properties	• Deflection Temperature at 264 psi ASTM D648: 157 degrees F. • Deflection Temperature at 66 psi ASTM D648: 164 degrees F. • Coefficient of Thermal Expansion ASTM D696: 3.8x10 Inches per inch per degrees F. Flammability • (Burning Rate) ASTM D635: 0.06 Inches per minute • Flammability UL 94: HB. • Smoke Density Rating ASTM D2843: 53.8 percent. • Self-Ignition Temp ASTM D1929: 880 degrees F. • Flame Spread Index ASTM E84: 85. • Smoke Development Index ASTM D84: 450. • Glass Transition Temperature ASTM D3418: 178 degrees F.
Flame Testing	• Surface burning characteristics: Flame spread/smoke developed rating less than 85/450, tested to approximately equal ASTM E 84 and UL 723. • Rate of burning: Tested to ASTM D 635 at nominal 0.060 inch (1.5 mm) thickness with resulting Classification CC1. • Vertical burning: Tested to UL 94, classified as 94V-2 in thickness of 0.118 inch (3.0 mm) or greater and 94HB in thicknesses less than 0.118 inch (3.0 mm). • Self-ignition temperature: 800 degrees F (427 degrees C), tested to ASTM D 1929.

Requirements	• Comply with all applicable provisions of the 2010 ADA Standard for Accessible Design • Character Proportion: Letters and numbers on signs must have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10. • Color Contrast: Characters and symbols must contrast with their background - either light characters on a dark background or dark characters on a light background. • Raised Characters or Symbols: Letters and numbers on signs must be raised 1/32 in (0.8 mm) minimum and be sans serif characters. Raised characters or symbols must be at least 5/8 in (16 mm) high but no higher than 2 in (50 mm). Symbols or pictograms on signs must be raised 1/32 in (0.8 mm) minimum. • Symbols of Accessibility: Accessible facilities required to be identified must use the international symbol of accessibility. • Braille: Grade II with accompanying text. • Laminated photopolymers, added-on characters, and engraved characters are not acceptable.
Submittals	Submit under provisions of Section 01300
Support	Nova Poylmers, info@novapolymers.com, 888-484-NOVA

Acceptable Fabricators

For a list of Photopolymer Sign Manufacturer's that have successfully completed a process audit to confirm their adherence to Nova Polymers' guidelines & best practices, please visit our website.

BIM Objects

For a list of Free BIM Object files to download, please visit ARCAT.