



Novacryl 101467 Tactile Signage Specifications

ADA Compliant. **PERIOD**<sup>®</sup>

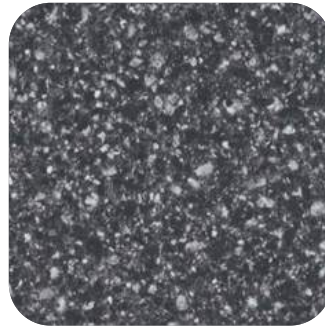


## Thank you for your interest in Nova Polymers.

At Nova Polymers, we are committed to customer service, product development/support and the continual development of progressive product solutions. Our goal is to provide the most creative and diverse range of photopolymer materials to the architectural design and sign fabrication industries.

It is through these commitments, as well as our relationship with the architectural sign community that ensures we are fully capable of exceeding all of your design expectations. Nova continues to be at the forefront of ADA legislation by representing the ISA and SEGD on the International Code Council and is proud to be the industry leader as the focus continues to increase on green building initiatives and sustainable design materials in environmental graphic design. Whether it is innovative materials and equipment, workflow management software or consulting services that can make your process more efficient and profitable; we are there to help.

Thank you for your time. If there are any questions, please feel free to contact us directly.



# Novacryl® Series Photopolymer

## SECTION 10 14 67

### Tactile SIGNAGE

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Plastic interior panel signs.
  - 1. Room Identification.
  - 2. Stairs.
  - 3. Restroom.
  - 4. Elevator Lobby.
  - 5. Informational Signage.
  - 6. Directory Signage.
- B. Plastic exterior panel signs.
  - 1. Room Identification.
  - 2. Stairs.
  - 3. Restroom.
  - 4. Elevator Lobby.
  - 5. Informational Signage.
  - 6. Directory Signage.

##### 1.2 RELATED SECTIONS

- A. Section 06200 - Finish Carpentry: installation accessories and requirements.
- B. Section 10410 - Directories.
- C. Section 10420 - Plaques.

##### 1.3 REFERENCES

- A. ANSI 117.1 – For Buildings and Facilities.
- B. ASTM International (ASTM):
  - 1. PHYSICAL
    - 1. ASTM D792 – Specific Gravity
    - 2. ASTM D542 – Optical Refractive Index
    - 3. ASTM D1003 – Light Trans - Total, Light Trans - Haze
    - 4. ASTM D570 – Water Absorption by weight
  - 2. MECHANICAL
    - 1. ASTM D638 – Tensile Strength
    - 2. ASTM D790 – Tensile Modulus of Elasticity, Flexural Strength, Flexural Modulus of Elasticity
    - 3. ASTM D256 – Izod Impact Strength Molded - Milled Notch
    - 4. ASTM D785 – Rockwell Hardness
    - 5. ASTM D3763 – Drop Dart Impact
    - 6. ASTM D732 – Shear Strength
    - 7. ASTM D695 – Compressive Strength

3. THERMAL
    1. ASTM D648 – Deflection Temperature @ 264 psi, Deflection Temperature @ 66 psi
    2. ASTM D696 – Coefficient of Thermo Expansion
    3. ASTM D635 – Flammability (Burning Rate)
    4. ASTM D2843 – Smoke Density Rating
    5. ASTM D1929 – Self-Ignition Temp
    6. ASTM E84 – Flame Spread Index
    7. ASTM D84 – Smoke Development Index
    8. ASTM D3418 – Glass Transition Temperature
  4. ELECTRICAL
    1. ASTM D150 – Dielectric Constant @ 1KHz, Dielectric Constant @ 1MHz
    2. ASTM D149 – Dielectric Strength
  - C. Underwriters Laboratories (UL):
    1. UL 94 - Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.
    2. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials.
- 1.4 PERFORMANCE REQUIREMENTS
- A. Provide photopolymer signage that conforms to the requirements of all regulatory agencies holding jurisdiction.
  - B. Provide glow in the dark, photo luminescent material that complies with applicable provisions of ASTM E 2073-02 and DIN 67510. Photo luminescent material must have up to eight hours of luminance.
  - C. Requirements:
    1. Comply with all applicable provisions of the 2010 ADA Standard for Accessible Design.
    2. 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.
    3. Color Contrast: Characters and symbols must contrast with their background - either light characters on a dark background or dark characters on a light background.
    4. 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.
    5. Symbols of Accessibility: Accessible facilities required to be identified must use the international symbol of accessibility.
    6. Braille: Grade II with accompanying text.
  - D. Fire Performance Characteristics:
    1. Provide photopolymer signage with surface burning characteristics that consist of a flame spread (ASTM E84) of 85 and a smoke development (ASTM D84) of 450 when tested in accordance to UL 723 (ASTM E84).
    2. Self-Extinguishing: Provide photopolymer signage with a CC1 classification for .060 in thick material when tested in accordance with the procedures in ASTM D 635, Standard Test Method for Rate of Burning and/or Extent and Time of Burning Plastics in a Horizontal Position.
    3. Vertical Burn: Provide photopolymer material that is classified as 94V-2 for material .118 in thick or greater and 94HB for material .118 in thick or less when tested in accordance with UL 94, Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.

4. Self-Ignition Temperature: Provide photopolymer material that has a self-ignition temperature of 800 degrees F (427 degrees C) when tested in accordance with ASTM D 1929.

## 1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  1. Preparation instructions and recommendations.
  2. Storage and handling requirements and recommendations.
  3. Installation methods.
- C. Shop Drawings: Detail drawings showing sizes, lettering and graphics, construction details of each type of sign and mounting details with appropriate fasteners for specific project substrates.
- D. Manufacturer's Installation Instructions: Printed installation instructions for each signage system.
- E. Message List: Signage report indicating signage location, text and sign type.
- F. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and available pictograms, characters, and Braille indications.
- G. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and typical pictograms, characters, and Braille indications.

## 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum two years documented experience in work of this Section.
- B. Installer Qualifications: Minimum two years documented experience in work of this Section.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
  1. Furnish signs designated by Architect.
  2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
  3. Refinish mock-up area as required to produce acceptable work.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in unopened factory packaging.
- B. Inspect materials at delivery to verify there are no defects or damage.
- C. Store products in manufacturer's original packaging until ready for installation in climate controlled location away from direct sunlight.

- D. Store and dispose of solvent-based materials, and materials used with solvent-based materials in accordance with requirements of local authorities having jurisdiction.

## 1.8 PROJECT CONDITIONS

- A. Install products in an interior climate controlled environment.
- B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Nova Polymers, Inc; 8 Evans Street, Suite 201, Fairfield, NJ 07004. ASD. (888) 484-NOVA (6682). Tel: (973) 882-7890. Fax: 973-882-5614. Email: [info@novapolymers.com](mailto:info@novapolymers.com). Web: <http://www.novapolymers.com>.
  - 1. United States:
    - a. Acceptable Fabricator: AdLight Group, 4150 Elati St., Denver, CO 80216. Phone: (303) 399-3334. Email: [Sales@AdLightGroup.com](mailto:Sales@AdLightGroup.com). Web: [www.adlightgroup.com](http://www.adlightgroup.com).
    - b. Acceptable Fabricator: AGS, 302 Commerce Drive, Exton, PA 19341. Phone: (610) 363-8150. Email: [info@agsinfo.com](mailto:info@agsinfo.com). Web: [www.agsinfo.com](http://www.agsinfo.com).
    - c. Acceptable Fabricator: ASI, Iowa - Grinnell, IA, 1219 Zimmerman Dr., Grinnell, IA 50112. Phone: (641) 236-6616. Web: [www.asisignage.com/locations/iowa](http://www.asisignage.com/locations/iowa)
    - d. Acceptable Fabricator: Bell Company, 8327 Parkway Dr., Leeds, AL 35094. Phone: (800) 828-3564. Email: [sales@bellcoinc.com](mailto:sales@bellcoinc.com). Web: [www.braillebybell.com](http://www.braillebybell.com).
    - e. Acceptable Fabricator: Boyd Sign Systems, 3901 S Kalamath Street, Englewood, CO 80110. Phone: (800) 333-3190. Email: [signs@boydsignsystems.com](mailto:signs@boydsignsystems.com). Web: [www.boydsignsystems.com](http://www.boydsignsystems.com)
    - f. Acceptable Fabricator: Cab Signs, 38 Livonia Ave, Brooklyn, NY 11212. Phone: (800) 394-1690. Email: [sales@cab-signs.com](mailto:sales@cab-signs.com). Web: [www.cab-signs.com](http://www.cab-signs.com).
    - g. Acceptable Fabricator: Cadwell Signs, 4 Kuniholm Drive, Holliston, MA 01746. Phone: (508) 429-3100. Web: [www.cadwellsigns.com](http://www.cadwellsigns.com).
    - h. Acceptable Fabricator: Graphic Components, 2800 Patterson Street, Greensboro, NC 27407. Phone: (336) 542-2128. Email: [sales@graphiccomponents.com](mailto:sales@graphiccomponents.com). Web: [www.graphiccomponents.com](http://www.graphiccomponents.com).

- k. Acceptable Fabricator: InPro Corporation, S80 W18766 Apollo Drive, Muskego, WI 53150. Phone: (800) 222-5556. Email: kellyboeder@inprocorp.com. Web: www.inprocorp.com.
  - l. Acceptable Fabricator: Kroy Sign Systems, 8221 E Gelding Dr., Scottsdale, AZ 85260. Phone: (800) 950-5769. Email: signs@kroysignsystems.com. Web: www.kroysignsystems.com.
  - m. Acceptable Fabricator: Neiman & Company, 6842 Valjean Ave., Van Nuys, CA 91406. Phone: (818) 781-8600. Email: signs@neimanandco.com. Web: www.neimanandcompany.com.
  - n. Acceptable Fabricator: Park Place Sign Systems, Inc., 2019 30th Street, Hannibal, MO 63401. Phone: (573) 221-1360. Email: sales@parkplacesign.com. Web: www.parkplacesign.com.
  - o. Acceptable Fabricator: Sign Pro, 60 Westfield Dr, Plantsville, CT 96479. Phone: (860) 229-1812. Email: pete@signpro-usa.com. Web: www.signpro-usa.com.
  - p. Acceptable Fabricator: Signtech, 4444 Federal Blvd., San Diego, CA 92102. Phone: (619) 527-6100 ext.117. Email: sales@Signtech.com. Web: www.signtech.com.
  - q. Acceptable Fabricator: Tube Art Group, 11715 SE 5th Street, Bellevue, WA 98005. Phone: (206) 223-1122 Email: mwoods@tubeart.com. Web: www.tubeartgroup.com
  - r. Acceptable Fabricator: Welch Signs, 7 Lincoln Ave., Scarborough, ME 04074. Phone: (207) 883-6200. Web: www.welchsign.com
2. Canada:
- a. Acceptable Fabricator: Marvel Sign and Display, Inc., 99 Rodinea Road, Unit 1, Vaughan, Ontario L6A 1R3, Canada. Phone: (905) 856-6920 Email: alan@marvelsigns.ca. Web: www.marvelsigns.ca.
  - b. Acceptable Fabricator: WSI Sign System Ltd. & KING Architectural Products, 31 Simpson Road, Bolton - Ontario L7E 2R6. Phone: (905) 857-2804. Web: www.king-ap.com.
3. Middle-East:
- a. Acceptable Fabricator: Doganer Signage Systems, Eminel Sanayi Sitesi 1452. Sk. No: 53, OSTİM ANKARA, Turkey. Phone: + 90 312 395 47 10, Email: info@doganermimari.com.tr, Web: www.doganermimari.com.tr
  - b. Acceptable Fabricator: Gulfcrafts, New Industrial Area, Zone #81, Street #9, Building #40, Doha – Qatar. Phone: 974 44602002 or 974 30244303. Email: elma@gulfcrafts.net. Web: www.gulfcrafts.net.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

## 2.2 SIGNAGE - GENERAL

- A. It is the intent of these specifications to establish a sign standard for the Owner including but not limited to, wall-mounted directional signs, primary room identification, restrooms, conference rooms and all code compliant Braille signage.
- B. Comply with all applicable provisions of the 2010 ADA Standard for Accessible Design codes that apply to the State and Local jurisdiction of the project.
- C. If required text and graphics are not indicated in specification or on drawings, obtain Owner's instructions as to text and graphics prior to preparation of shop drawings.



- D. Typography: See Drawings. Copy shall be a clean and accurate reproduction of typeface(s) specified. Upper and lower case and all caps as indicated in Sign Type drawings and Signage Schedule. Letter spacing to be set by manufacturer.
- E. Arrows, symbols and pictograms will be provided in style, sizes, colors and spacing as indicated in drawings for each sign system.
- F. Braille:
  - 1. Grade 1 Braille.
  - 2. Grade 2 Braille.
  - 3. California Braille.
- G. Design:
  - 1. Text/Graphics Placement: Right justified.
  - 2. Text/Graphics Placement: Centered.
  - 3. Text/Graphics Placement: Left justified.
  - 4. Text/Graphics Placement: As indicated on contract drawings.
  - 5. Font: As indicated on the Contract Drawings.
  - 6. Font: Arial.
  - 7. Font: Avenir.
  - 8. Font: Charlotte Sans Book.
  - 9. Font: Futura.
  - 10. Font: Gill Sans.
  - 11. Font: Helvetica Regular.
  - 12. Font: Helvetica Bold.
  - 13. Font: Optima.
  - 14. Font: Stone Sans Serif.
  - 15. Font: Univers Condensed.
  - 16. Font: \_\_\_\_\_.

## 2.3 INTERIOR SIGNAGE

- A. Panel Material: Novacryl PT Series Photopolymer
  - 1. Composition: 0.032 inch (0.8 mm) thick moisture resistant, non-glare interior nylon photopolymer on ultraviolet resistant clear PETG sign base, single piece construction. Laminated photopolymers, added-on characters, and engraved characters are not acceptable.
  - 2. Sustainable Certification: Minimum 40 percent pre-consumer recycled content.
  - 3. Base thickness: 0.020 inch (0.5 mm) Gloss PETG.
  - 4. Base thickness: 0.040 inch (1.0 mm) Non-glare PETG.
  - 5. Base thickness: 0.060 inch (1.5 mm) Non-glare PETG.
  - 6. Base thickness: 0.080 inch (2.0 mm) Non-glare PETG.
  - 7. Base thickness: 0.118 inch (3.0 mm) Non-glare PETG.
  - 8. Base thickness: 0.190 inch (4.8 mm) Non-glare PETG.
  - 9. Base thickness: 0.236 inch (6.0 mm) Non-glare PETG.
  - 10. Base thickness: 0.375 inch (9.5 mm) Gloss PETG.
  - 11. Base thickness: 0.472 inch (12.0 mm) Gloss PETG.
  - 12. Type and Color: To be selected from manufacturer's full color range by Architect.
  - 13. Size: \_\_\_\_\_
  - 14. Surface burning characteristics: Flame spread/smoke developed rating less than 75/120, tested to ≈STM E 84 and UL 723.
  - 15. Rate of burning: Tested to ≈STM D 635 at nominal 0.060 inch (1.5 mm) thickness with resulting Classification CC1.
  - 16. 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).
17. Self-ignition temperature: 800 degrees F (427 degrees C), tested to ASTM D 1929.
- B. Panel Material: Novacryl AL Series Photopolymer.
1. Composition: 0.032 inch (0.8 mm) thick moisture resistant interior nylon photopolymer bonded to 0.017 inch (0.4 mm) thick brushed aluminum alloy base.
  2. Base thickness: 0.017 inch (0.4 mm) thick brushed aluminum alloy base.
  3. Type and Color: To be selected from manufacturer's full color range by Architect.
  4. Size: \_\_\_\_.
- C. Panel Material: Novacryl Permaglow 250.
1. Composition: 0.032 inch (0.8 mm) thick moisture resistant interior nylon photopolymer bonded to 0.047 inch 250/22 photoluminescent rigid PVC.
  2. Base thickness: 0.047 inch thick photo luminescent rigid PVC.
  3. Type and Color: To be selected from manufacturer's full color range by Architect.
  4. Size: \_\_\_\_.
- D. Panel Material: Novacryl ECR Series Photopolymer.
1. Composition: 0.032 inch (0.8 mm) thick moisture resistant, non-glare interior nylon photopolymer on 3form Varia Ecoresin PETG sign base, single piece construction. Laminated photopolymers, added-on characters, and engraved characters are not acceptable.
  2. Base thickness: Determined by the 3form Varia Ecoresin pattern. Gauge not to exceed 0.0375 inch (9.5 mm)
  3. Type and Color: To be selected from the 3form Varaiia ecoresin line of substrates by Architect. At least one side of the Varia substrate chosen must be flat.
  4. Type and Color: To be selected from manufacturer's full color range by Architect.
  5. Size: \_\_\_\_.
- E. Panel Material: Novacryl LP Series Photopolymer
1. Composition: 0.032 inch (0.8 mm) thick moisture resistant, non-glare interior nylon photopolymer on a Formica, Pionite or Wilsonart laminate sign base, single piece construction. Laminated photopolymers, added-on characters, and engraved characters are not acceptable.
  2. Base thickness: Determined by the 3form Varia Ecoresin pattern. Gauge not to exceed 0.0375 inch (9.5 mm)
  3. Type and Color: To be selected from Wilsonart, Pionite or Formica laminates by Architect. The pattern can be a solid color, wood grain or other textures. The finish must be flat and either matte, suede or gloss.
  4. Size: \_\_\_\_.

## 2.4 EXTERIOR SIGNAGE

- A. Panel Material: Novacryl EX Series Photopolymer.
1. Composition: 0.032 inch (0.8 mm) thick exterior-grade photopolymer resin bonded to 0.016 inch (0.4 mm) thick aluminum alloy base.
  2. Base thickness: 0.016 inch (0.4 mm) thick brushed aluminum alloy base.
  3. Type and Color: To be selected from manufacturer's full color range by Architect.
  4. Size: \_\_\_\_.

## 2.5 ACCESSORIES

- A. Adhesive:
1. Type recommended by sign manufacturer.

2. Maximum volatile organic compound (VOC) content: 70 grams per liter.
- B. Tape: Double sided, waterproof, pressure sensitive.
- C. Fasteners: Chrome plated screws.
- D. Fasteners: Brass screws.
- E. Fasteners: Stainless steel screws.

## 2.6 FABRICATION

- A. Fabricate panel material in accordance with manufacturer's instructions and approved shop drawings.
- B. Fabricate signs by photo polymer process using film negatives to produce characters and graphics in contrasting color, raised. Refer to Signage Schedule.
- C. Characters:
  1. Height: Refer to Signage Schedule.
  2. Style: Refer to Signage Schedule.
  3. Width to height ratio: Refer to Signage Schedule.
  4. Stroke width to height ratio: Refer to Signage Schedule.
- D. Pictograms: Refer to Signage Schedule.
- E. Provide Braille Grade indications for each character.
- F. Frames:
  1. Miter corners; fit to hairline joint.
  2. Secure frame to sign with adhesive.
- G. Changeable Slide Inserts: Clear PETG sheet cover with slot behind for insertion of changeable slide strip, removed from side.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

