

Product Family	Primary Component	% Recycled Content Post Consumer	% Recycled Content Pre Consumer	Country of Origin
Metalgraph Plus+™	Modified Impact Acrylic	0%	15%	United States
Multigraph	ABS - PMMA	0%	20%	Austria
LaserGlow™	Modified Impact Acrylic	0%	10%	United States
Textures	Modified Impact Acrylic	0%	20%	United States
LaserMax®	Modified Impact Acrylic	0%	15%	United States
LaserMark®	Modified Impact Acrylic	0%	15%	United States
Reverse LaserMark®	Modified Impact Acrylic	0%	0%	United States
ADA Alternative®	Modified Impact Acrylic	0%	20%	United States
FlexiBrass® & FlexiColor®	Modified Impact Acrylic	0%	0%	United States
LaserLights	PET	N/A	N/A	United States
ColorCast Acrylics	PMMA	N/A	N/A	United States
LaserMag	PET	N/A	N/A	United States
Earthtones	ABS	0%	20%	United States
Mattes	ABS	0%	20%	United States
Ultra-Mattes Front Engraveable	Modified Impact Acrylic	0%	20%	United States
Ultra-Mattes Reverse & Slickers	Modified Impact Acrylic	0%	0%	United States
Lacquers	Modified Impact Acrylic	0%	20%	United States
Heavy Weights	Polyolefin	0%	20%	United States
Granites Deluxe™	Modified Impact Acrylic	0%	20%	United States
Satins	ABS	0%	20%	United States
NoMark® Plus & Standard Metals	ABS	0%	20%	United States
3M467- MP (Adhesive)	Clear Acrylic Adhesive	N/A	N/A	United States
* Regulatory Information:	Volatile Organic Compounds: N/D		VOC Less H2O & Exempt Solvents: N/D	
Protective Masking	Polyethylene Film	N/A	N/A	United States
	* Does not contain toxic compounds subject to reporting under sec. 313 of the super fund amendment of 1986 & 40 CFR pt. 372			

MSDS: Rowmark has complete MSDS documents available on all products listed above via our website. When used under reasonable conditions and in accordance with the Rowmark recommendations for use, these products should not present any health or safety hazards. However, misuse or processing of the material in a manner not recommended by Rowmark may affect their performance and present potential health and safety hazards.

Technical Data: All physical properties, statements, and recommendations are either based on tests we believe to be reliable or our experience, but they are not guaranteed. Rowmark recommends each user determine the suitability of the products for their intended use.

1. PRODUCT AND COMPANY IDENTIFICATION

Rowmark, Inc.
2040 Industrial Drive
Findlay, OH 45840
USA

EMERGENCY PHONE NUMBERS:
Medical: 911
Poison Control: 800-589-3897

<u>Telephone Numbers</u>	<u>Phone Number</u>	<u>Available Hours</u>
Rowmark Customer Service International	1-877-ROWMARK 419-425-8974	7:00am-5:00pm EST

Product Name: ADA Alternative®
Product Synonym(s): Impact Modified Acrylic
Chemical Family: Acrylic Copolymer
Chemical Formula: Mixture
Chemical Name: Mixture
EPA Reg Number:
Product Use: Signage, Other

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient Name</u>	<u>CAS Registry Number</u>	<u>Typical Wt. %</u>	<u>OSHA</u>
P (EA/MMA)	Proprietary	50-54	N
Acrylic Styrene Copolymer	Proprietary	35-50	N
Methyl methacrylate	80-62-6	< 0.5	Y
Ethyl acrylate	140-88-5	< 0.1	Y

The substance(s) marked with a "Y" in the OSHA column are identified as hazardous chemicals according to the criteria of the OSHA Hazardous Communication Standard (29 CFR 1910.1200).

While this material is not classified as hazardous under Federal OSHA regulations, this MSDS contains valuable information critical to the safe handling and proper use of this product. This MSDS should be retained and available for employees and other users of this product.

The components of this product are all on the TSCA Inventory list.

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW:**

Various colors with characteristic odor. CAUTION! MELT PROCESSING RELEASES VAPORS WHICH MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION

POTENTIAL HEALTH EFFECTS:

Skin contact and inhalation of dust are expected to be the primary routes of occupational exposure to this material. As a finished product, it is a synthetic, high molecular weight polymer pellet. Due to its chemical and physical properties, this material does not require special handling other than the good industrial hygiene and safety practices employed with any industrial material of this type. Ethyl acrylate is listed as a substance that may reasonably be anticipated to be a carcinogen by the National Toxicology Program (NTP) and is classified as "possibly carcinogenic to humans" by the International Agency for Research on Cancer.

4. FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water. Get medical attention if irritation persists.

IN CASE OF CONTACT, flush the area with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops and persists.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES:

Auto-Ignition Temperature:	393 C/739 F	
Flash Point:	NA	Flash Point Method
Flammable Limits:	Upper: NA	
	Lower: NA	

EXTINGUISHING MEDIA:

Use water spray, carbon dioxide, foam or dry chemical.

FIRE FIGHTING INSTRUCTIONS:

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

FIRE AND EXPLOSION HAZARDS:

Heated material can form flammable vapors with air.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR LEAK:

Contain spill. Sweep or scoop up and remove to suitable container. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation.

STORAGE: Avoid temperature extremes during storage; ambient temperature preferred.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS: Adequate ventilation in work area is needed due to dust or vapors created during fabrication.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

EYE/FACE PROTECTION: Safety glasses or face shield should be used. If exposed to dust, chemical glasses may be required.

SKIN PROTECTION: No precautions other than clean body-covering clothing should be needed. Use insulated gloves for thermal protection, when desired.

RESPIRATORY PROTECTION: In dusty atmospheres, use an approved respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/ODOR: Various colors, characteristic odor

BOILING POINT: N/A

VAPOR PRESSURE: N/A

VAPOR DENSITY: N/A

SPECIFIC GRAVITY: 1.15-1.19

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

CONDITIONS TO AVOID: Prolonged contact with acids, alkalis and strong oxidizing agents may attack or dissolve the polymer.

11. TOXICOLOGY INFORMATION

No data available

12. ECOLOGICAL INFORMATION

MOVEMENT & PARTITIONING: In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment.

DEGRADATION & PERSISTENCE: This water insoluble polymeric solid is expected to be inert in the environment. Surface photo degradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

ECOTOXICITY: Not expected to be acutely toxic, but chips may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

13. DISPOSAL CONSIDERATIONS

Disposal must be in accordance with applicable governmental regulations.

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.): This product is not regulated by D.O.T. when shipped domestically by land.

CANADIAN TDG INFORMATION: This product is not regulated by TDG when shipped domestically by land.

15. REGULATORY INFORMATION

(Not meant to be all-inclusive – selected regulations represented)

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	N	Delayed (Chronic) Health	N
Sudden Release of Pressure	N	Reactive	N
Fire	N		

The components of this product are all on the TSCA inventory list.

INGREDIENT RELATED REGULATORY INFORMATION:

SARA REPORTABLE QUANTITIES	CERCLA RQ	SARA TPQ
Ethyl acrylate	1000 LBS	N/A
Methyl methacrylate	1000 LBS	
P (EA/MMA)	N/A	

SARA TITLE III, SECTION 313

This product does contain chemical(s), which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

Ethyl acrylate
Methyl methacrylate

CALIFORNIA PROP 65 – CARCINOGEN

This product does contain the following chemical(s), as indicated below, currently on the California list of Known Carcinogens.

Ethyl acrylate

MASSACHUSETTS RIGHT TO KNOW

This product does contain the following chemical(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Ethyl acrylate
Methyl methacrylate

15. REGULATORY INFORMATION (cont'd)

NEWJERSEY RIGHT TO KNOW

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Ethyl acrylate
Methyl methacrylate

PENNSYLVANIA ENVIRONMENTAL HAZARD

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

Ethyl acrylate
Methyl methacrylate

PENNSYLVANIA RIGHT TO KNOW

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Ethyl acrylate
Methyl methacrylate

PENNSYLVANIA SPECIAL HAZARD

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Special Hazard List.

Ethyl acrylate

16. OTHER INFORMATION

NFPA HAZARD RATING (National Fire Protection Association):

Fire	1	0	Reactivity
Health	0	0	
	–		
Special			

FIRE: Materials that must be preheated before ignition can occur.

HEALTH: Materials that under emergency conditions would offer no hazard beyond that of ordinary combustible materials.

REACTIVITY: Materials that in themselves are normally stable, even under fire exposure conditions.

REASON FOR ISSUE:

PLASKOLITE, INC.

POST OFFICE BOX 1497
COLUMBUS, OHIO 43216
614/294-3281
FAX 614/297-7282

November 12, 2007

RE: Plaskolite Acrylic Plastic Sheet
LEED® Green Building Rating System™

To Whom It May Concern:

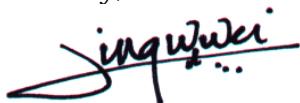
“LEED®” is the acronym for the US Green Building Council’s “Leadership in Energy and Environmental Design (LEED) Green Building Rating System™”, and is one of the more widely used building rating systems. LEED® promotes a whole-building approach to sustainability by recognizing performance in major categories of a project: sustainable sites, water efficiency, energy & atmosphere, materials & resources, indoor environmental quality and innovation & design process.

Plaskolite recognizes that no product by itself is LEED® certified, and that no product can guarantee specific points for LEED® certification. With this caveat, using Plaskolite’s acrylic plastic sheets may help with the following LEED® credits:

- Materials & Resources (MR), Credits 1.1 & 2.2 (Construction Waste Management) – The fact that Plaskolite’s acrylic plastics sheets are 100% recyclable helps with the construction waste management credit.
- Materials & Resources (MR), Credits 5.1 & 5.2 (Regional Materials) – Plaskolite operates manufacturing plants in Ohio (Columbus and Zanesville), and in Mississippi (Olive Branch). Where applicable, credit can be received when projects are located within a 500-mile radius of one of our manufacturing plant.
- Indoor Environmental Quality (EQ), Credits 3.1 & 3.2 (Construction IAQ Management Plan During Construction and Before Occupancy) – Plaskolite’s acrylic plastics sheets do not require field fabrication and are a type of low-emitting material, which assists in preventing indoor air quality problems resulting from the construction/renovation process and sustains the comfort and well-being of construction workers and building occupants.

Please contact us at (614) 294-3281 if you have any questions related to this matter.

Sincerely,



Timothy W. Ling, P.E.
Environmental Engineer



Physical Properties	ASTM Test Method	Units	Values
Specific Gravity	D-792		1.19
Optical Refractive Index	D-542		1.49
Light Transmittance Total Haze	D-1003	% %	92 2
Sound Transmission	E 90 E 413	db	27
Water Absorption	D-570	% By Weight	0.40
Shrinkage	D-702	% Shrinkage	<5%

Mechanical			
Tensile Strength - Max. Tensile Elongation - Max. Tensile Modulus of Elasticity	D-638	psi % psi	11,030 5.8 490,000
Flexural Strength - Max. Flexural Modulus of Elasticity	D-790	psi psi	17,000 490,000
Izod Impact Strength - Molded Notch Izod Impact Strength - Milled Notch	D-256	ft-lb/in Notch ft-lb/in Notch	0.4 0.28
Tensile Impact Strength	D-1822	ft-lb/in ²	20
Abrasion Resistance Change in Haze 0 cycles 10 cycles 50 cycles 200 cycles	D-1044	Haze, % Haze, % Haze, % Haze, %	0 11.2 24.0 24.9
Rockwell Hardness	D-785		M-95

Thermal	ASTM Test Method	Units	Values
Maximum Recommended Continuous Service Temperature		°F	170-190
Softening Temperature		°F	210-220
Melting Temperature		°F	300-315
Deflection Temperature 264 psi 66 psi	D-648	°F °F	203 207
Coefficient of Thermal Expansion -30 to 30°C	D-696	in/(in-°F) x10 ⁻⁵	3.0
Thermal Conductivity	C-177	BTU-ft/ (hr-ft ² -°F)	0.075
Flammability (Burning Rate)	D-635	in/minute	1.019
Smoke Density Rating	D-2843	%	3.4
Self-Ignition Temperature	D-1929	°F	833
Flame Spread Index	E-84		115
Smoke Developed Index			550

Chemical			
Resistance to Stress - Critical Craze Stress to: Isopropyl Alcohol Lacquer Thinner Toluene Solvesso 100	ARTC modification of MIL-P-6997	psi psi psi psi	900 500 1,300 1,600

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 determine the suitability of our materials and suggestions before adopting them on a commercial scale.

PLASKOLITE, INC.
P.O. Box 1497 • Columbus, Ohio 43216
614/294-3281 • FAX: 877/538-0754
Email: plaskolite@plaskolite.com
www.plaskolite.com
1-800-848-9124



**SHERWIN
WILLIAMS.**

Chemical Coatings

CC-E14

POLANE® 700T Water Reducible Enamel

Black F63B520
 Clear F63V521
 White F63W522

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>
<p>POLANE® 700T Water Reducible Enamel is a low VOC, one component water reducible, polyurethane-acrylic enamel intended for the Business Machine and Electronic Cabinetry market. As a smooth or texture coating system, on structural foam or injection molded plastic or treated steel, it provides performance properties similar to two component solvent based polyurethanes in these markets.</p> <p>Advantages:</p> <ul style="list-style-type: none"> • VOC of less than 2.3 pounds/gallon at application • Volatile organic emissions of less than 1.0 pounds/gallon • High Quality - meets the performance requirements of the Business Machine/ Electronic Cabinetry market • No free isocyanate health hazard - urethane is pre-reacted • Water Based - No flash point - No fire hazard • Performance similar to solvent based polyurethanes in these markets • Improved performance over acrylic latex coatings • One Package - no catalyst • Excellent hardness • Available in a broad range of colors. • Air dry or force dry - low energy cure • Free of lead hazards as packaged in compliance with Consumer Product Safety Commission's (CPSC) 16CFR Chapter II: Subchapter B, part 1303 • Good solvent and chemical resistance • Reduction and clean up with water means cost savings for solvent and insurance, lower odors and improved working conditions. • Excellent resistance to color change as tested on HP-UV cabinet • Low HAPS solvent content 	<p>Gloss: 35-40 units Clear: 45-60 units may be adjusted lower with D64F505 Volume Solids: 37-40 ± 1% varies by color Viscosity: Brookfield #4 Spindle, RVT, 20 RPM 5500-6500 cps Recommended film thickness: Mils Wet 3.0 - 4.0 Mils Dry 1.2 - 1.6 Spreading Rate (no application loss) 360-548 sq ft/gal @ 1.2-1.6 mil dft Drying (1.2 mils dft, 77°F, 50% RH): To Touch: 20-30 minutes Tack Free: 30-40 minutes To Handle: 40-50 minutes To Pack: overnight Force Dry: 30 minutes at 140°F Good air movement and humidity control are necessary for proper drying of water reducible coatings. Flash 10-15 minutes between smooth and texture coats.</p> <p>Flash Point: none, Seta Flash Package Life: 1 year, unopened pH: 8.0 - 8.5</p> <p>Air Quality Data: (Theoretical) Non-photochemically reactive Volatile Organic Compounds (VOC) as packaged, maximum 2.3 lb/gal, 275 g/L Volatile Organic Emissions as packaged, maximum 1.0 lb/gal, 120 g/L</p> <p>An Environmental Data Sheet is available from your local Sherwin-Williams facility.</p>	<p>General: Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface passivation treatments to ensure optimum adhesion and coating performance properties. Consult Metal Preparation Brochure CC-T1 for additional details.</p> <p>Aluminum: Prime with Industrial Wash Primer, P60G2, or Kem Aqua® Wash Primer, E61G520.</p> <p>Galvanized Steel: Prime with Industrial Wash Primer, P60G2, or Kem Aqua Wash Primer, E61G520.</p> <p>Plastic: Due to the diverse nature of plastic substrates, a coating or coating system must be tested for acceptable adhesion to the substrate prior to use in production. Reground and recycled plastics along with various fire retardants, flowing agents, mold release agents, and foaming/blowing agents will affect coating adhesion. Wash the surface with isopropyl alcohol. The coating can be applied directly to most plastic surfaces. If needed, test with Kem Aqua Bonding Primer E61W525, Polane W₂ Primer, E61AC514, or Kem Aqua 65P SprayFil. Consult your Sherwin-Williams representative for system recommendations.</p> <p>Steel or Iron: Remove rust, mill scale, and oxidation products. For best results, treat the surface with a proprietary surface chemical treatment of zinc or iron phosphate to improve corrosion protection. Where a primer is needed use Polane W₂ Primer, E61AC514.</p> <p>Testing: Due to the wide variety of substrates, surface preparation methods, and application methods and environments, the customer should test the complete system for adhesion, compatibility and performance prior to full scale application.</p>

APPLICATION

Base coats/smooth coats can be applied using conventional, airless, air assisted airless, HVLP, or electrostatic methods. Texture coats must be applied using conventional spray.

Conventional Spray—smooth

Air Pressure 40-60psi
Fluid Pressure 10-12 psi
Tip055-.070
Reducer water
Reduction Rate ... as needed up to 10-25%

Conventional Spray—texture

Air Pressure 25-35 psi
Fluid Pressure 5-15 psi
Tip055-.070
Reduction Rate . as needed up to 10%
Over-reduction will give poor texture profile and appearance

HVLP:

Smooth Coat

Atomizing Air 10 psi max at cap
Fluid Pressure 6-10 psi
Tip055-.070
Reducer water
Reduction Rate 10-25%

Texture Coat

Atomizing Air 4-8 psi max at cap
Fluid Pressure 6-15 psi
Reduction Rate 0-10%

Cleanup:

Use water followed by a dilute blend of water and ammonia as soon as possible. For dried coating on equipment, use MIBK.

Follow manufacturer's safety recommendations when using any solvent.

Chemical Resistance

After ½ hour spot test and one hour recovery:
Isopropanol Good
10% NaOH Excellent
Ethyl Acetate Good
Ammonia Excellent
Ivory® Liquid Excellent
Clorox Formula 409® Excellent
MEK Good
Toluene Good
10% HCL Excellent
1 normal H2SO4 Excellent
5% Tide solution Excellent

Stain Resistance

After ½ hour spot test:
Coffee Excellent
Vaseline® Excellent
Coca-Cola Excellent
Catsup Excellent
Motor oil Excellent
Gasoline Excellent
Lipstick Excellent

SPECIFICATIONS

Product Limitations

- Avoid freezing. Store at temperatures of 40°F minimum to 100°F maximum - Freezing may destroy product.
- Allow 10-15 minutes flash off of basecoat before applying texture coat.
- Texture pattern is dependent on equipment set up, viscosity and operator technique.
- Keep container closed to prevent skinning of this fast dry coating. Filtering may be required.
- Product is thixotropic. Do not use viscosity cup to measure viscosity. Do not reduce over 25% for smooth coat or 10% for texturing.
- Water reducible coatings should be applied at high viscosity. They atomize very easily at higher viscosity.
- A minimum of 1.1 mils dry film per coat is required for good adhesion and film integrity.
- Other substrates may show lower pencil hardness with full cure. This may be due to adhesion, substrate profile, and substrate cleaning/pretreatment. Higher film thickness may also give lower pencil hardness.
- For optimum hardness and cure, allow 2-4 weeks of air drying for 1-1/2 to 2 mils dry film. Heavier film may require 6-8 weeks. For force dry curing of 30 minutes at 140°F or greater, full cure is attained after 48 hours additional air drying.
- Do not use Butyl Cellosolve or other cosolvents because of incompatibility.
- Do not use alkyd based primers under Polane 700T coatings.
- Products should be applied at temperatures above 50°F.
- Do not package Polane 700T coated products in air-tight plastic bags unless completely cured. Since Polane enamels continue to cure for several weeks, the build up of organic solvents and reaction by-products could cause improper cure and adhesion failure in use.

Performance Tests

Substrate: 24 gauge Bonderite 1000 steel panel, applied @ 1.5 mils dft cured 30 minutes at 140°F plus 48 hours air dry
Salt Spray Test 48-72 hours
Humidity 100 hours
Conical Mandrel Test passes
Impact Resistance, Reverse
No fracture 75 in lb
No Taped Pick Off 120+ in lb
Pencil Hardness HB-F
Crosshatch Adhesion Excellent
Taber Abrasion <75 mg
1000 cycles, CS17 wheel, 1000 g load
Freeze/Thaw Cycles 2 cycles
HPUV 350 hours, <2.0 Delta-E, FMC-2
Cure Test
100 MEK double rubs slight burnishing

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION

Thoroughly review product label and Material Safety Data Sheet (MSDS) for safety and cautions prior to using this product. A Material Safety Data Sheet is available from your local Sherwin-Williams facility. Please direct any questions or comments to your local Sherwin-Williams facility.

Note: Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application which are not known or under our control, The Sherwin-Williams Company cannot make any warranties as to the end result.