

Fabrication

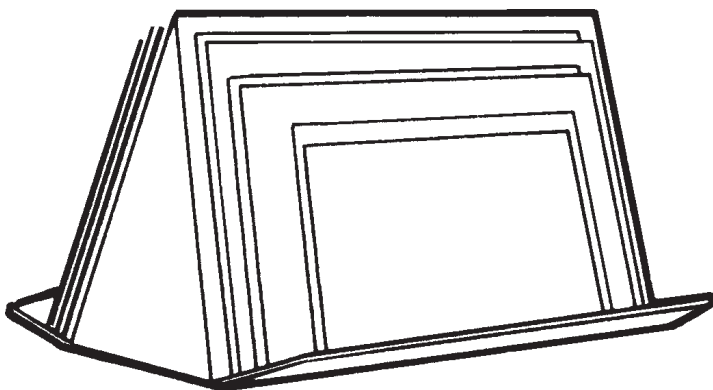
#1 Handling and Maintenance

This brief gives advice for:

- **Storage**
- **Marking on Masking**
- **Removing Masking**
- **Caring for ACRYLITE FF sheet**
- **Equipment and Materials Suppliers**
- **Additional Technical Information and Assistance**

Storage

Skids and cases of ACRYLITE® FF acrylic sheet are shipped with polyethylene film overwrap which protects the sheet from dirt and moisture. The overwrap should be left intact during storage to minimize warpage. Acrylic sheet should be stored vertically or in special racks where the sheet can lean at an angle of approximately 10°. These angled racks should have plywood panels, which give full support to the material.



If ACRYLITE FF sheet is stored horizontally, it must not be allowed to sag. Care must be taken to prevent chips or dirt from becoming lodged between the sheet as the weight of the material can force these chips through the protective masking and damage the sheet. If various sizes are stacked horizontally, the larger sheet should be at the bottom to avoid unsupported overhang.

ACRYLITE FF sheet should not be stored near radiators or steam pipes or other heat sources, as heat tends to soften and deform acrylic sheet. Do not store acrylic sheet near spray painting booths or expose it to other solvent vapors which may penetrate the masking and damage the sheet surface.

Marking on Masking

ACRYLITE FF sheet is manufactured with a masking on both surfaces to protect the sheet from scratching during storage and handling. Both latex paper and polyethylene film masking are available.

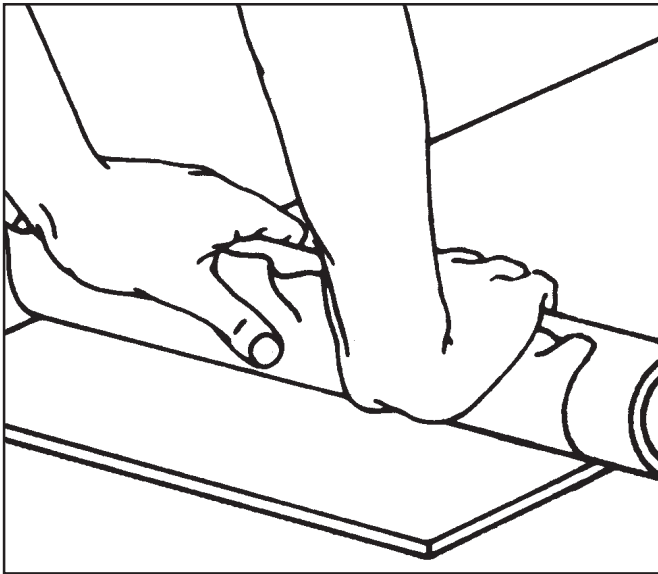
Paper masking can be marked with almost any writing tool including pencils, ballpoint pens, and felt tip pens. Marking on polyethylene masking may be done with grease pencils and certain felt tip markers. See the Equipment and Materials Suppliers section of this Tech Brief.

Removing Masking

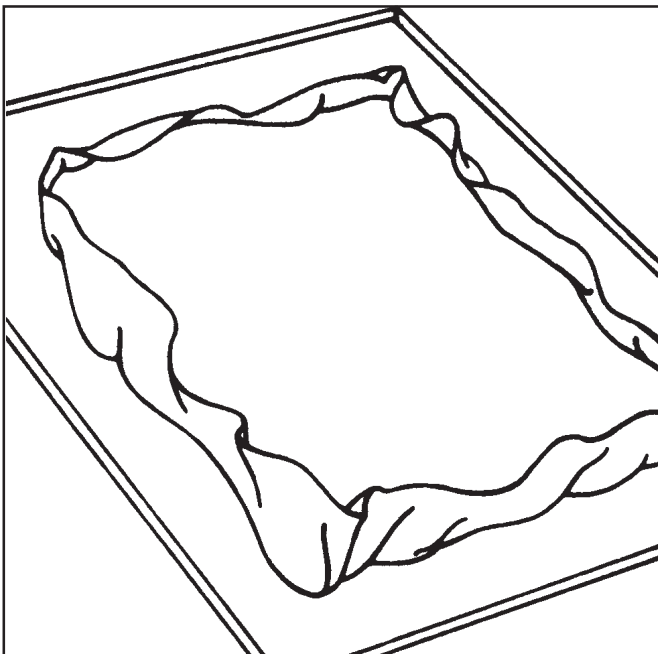
The sheet masking should be left in place during most fabrication operations to protect the sheet surface. The masking may be removed for intricate detail work on the sheet if necessary. Certain heat sources used in line bending and thermoforming operations may also require removal of the masking. See Tech Briefs for “Line Bending” and “Thermoforming” for details.

Unmasked sheet should be stored in the original shipping cartons. Avoid handling unmasked sheet unnecessarily.

You can remove paper masking with a cardboard tube by rolling the masking around it. Masked ACRYLITE FF sheet should be kept away from heat and sunlight, and masking should be removed soon after installation. If the adhesive has hardened, moistening it with aliphatic naphtha, hexane, or kerosene will help to soften it. Do not use gasoline or sharp-edged objects such as razor blades. **Any oily film left behind by solvents should be removed immediately by washing.**



Roll the masking paper onto a cardboard tube.



Roll the masking paper back enough to allow work on the edges of the sheet.

Caring for ACRYLITE FF Sheet

Washing

Wash ACRYLITE FF sheet with a solution of mild soap or detergent and lukewarm water. Use a clean soft cloth, applying only light pressure. Rinse with clean water and dry by blotting with a damp cloth or chamois.

Grease, oil, or tar may be removed with a good grade of hexane, aliphatic naphtha, or kerosene. These solvents may be obtained at a paint or hardware store and should be used in accordance with manufacturer's recommendations.

DO NOT USE: Window cleaning sprays, kitchen scouring compounds or solvents such as acetone, gasoline, benzene, alcohol, carbon tetrachloride, or lacquer thinner. These can scratch the sheet's surface and/or weaken the sheet causing small surface cracks called "crazing."

Dusting

Dust with a soft, damp cloth or chamois. Dry or gritty cloths may cause surface scratches and create a static electric charge on the surface (see section on neutralizing static electricity).

Polishing

Protect ACRYLITE FF sheet and maintain its surface gloss by occasional polishing with a good plastic cleaner and polish. Apply a thin, even coat with a soft clean cloth and polish slightly with cotton flannel. Then wipe with a damp cloth to help eliminate electrostatic charges that can attract dust particles.

Neutralizing Static Electricity

A static electrical charge can develop on ACRYLITE FF sheet during handling and processing. This is not unique to ACRYLITE FF sheet but is common to many materials, particularly plastics.

When the paper or film masking is stripped off the acrylic sheet, a static charge is created on the sheet surface. Static electricity attracts dust, chips, etc. floating in the air or on nearby work surfaces and holds these contaminants tightly to the surface. A compressed air gun will remove some of this surface dirt, but much of it continues to cling to the sheet. Because the sheet must be dirt-free before bending, painting or thermoforming operations, a separate step is required.

To temporarily eliminate the electrical charge on all plastic surfaces, ionizing air guns can be used. These guns provide a stream of charged particles. They effectively neutralize static charges that hold dirt to the surface. By using ionized air to clean ACRYLITE FF sheet after the masking has been removed, the sheet can be directly heated, painted, or otherwise processed. Because additional cleaning is eliminated, considerable man-hours will be saved making the economic advantages obvious. The appearance of painted and/or silk-screened sheet is greatly improved by the elimination of static charges.

Several anti-static cleaners for plastics are also available which will reduce static electricity and dust attraction. Wiping with a soft damp cloth or chamois is all that is necessary to keep ACRYLITE FF sheet dust-free between applications of these cleaners.

Removing Scratches

Fine scratches can be removed by hand polishing. Apply a plastic scratch remover to a soft flannel pad and rub. When the scratches have disappeared, remove all residue and polish. For deeper scratches, first sand lightly with a 400-grit "wet or dry" sandpaper, using plenty of water and rinsing the sandpaper frequently. Follow by buffing with a clean muslin wheel and a good polishing compound. For the highest gloss, use a clean-up wheel made of soft cotton or flannel sections and on which no compound is used. An electric drill with a buffing wheel is ideal.

Contact your local Authorized Distributor of ACRYLITE acrylic sheet for information on available scratch removal kits.

Equipment and Materials Suppliers

Markers

Sharpie

Sanford Corporation
2711 Washington Blvd.
Bellwood, IL 60104
800-323-0749
www.sanfordcorp.com

Anti-Static Cleaners and Polishes

210 and 210 Plus Plastic Cleaner

Sumner Laboratories
186 Lincoln St.
Boston, MA 02111
617-542-8656
Fax: 617-482-9001

20/20 Plastic-Cleaner

Craftics, Inc.
PO Box 91930
Albuquerque, NM 87199
505-338-0005
Fax: 505-338-0008
www.craftics.com

Plexus Plastic Center

Plexus
638 Lindero Canyon Rd.
#371
Agoura, CA 91301
800-405-6495
Fax: 818-879-0697
www.plexusplasticcleaner.com

Scotch-Brite High Performance Cloth

3M Corp – Home Care Division
2100 Wilson Ave.
St. Paul, MN 55119
877-362-5684
Fax: 651-733-0914
www.3m.com

Anit-Static Air Guns

Simco Company

2257 North Penn Rd.
Hatfield, PA 19440
800-203-3419
Fax: 215-822-3795
www.simco-static.com

Additional Technical Information and Assistance

We invite you to visit our
TechKnowlogy Center at www.cyro.com.

Visitors have immediate access to frequently asked questions, technical concerns, physical properties, processing conditions, fabrication tips, regulatory compliance information, engineering guidelines, tips for troubleshooting, and hundreds of other facts about acrylics from one of North America's leading manufacturers of acrylic-based polymer and sheet products.



Technical Service

For more information or specific questions about your project, contact CYRO's Technical Service Center.

Orange, CT
25 Executive Blvd.
203-795-6081

Headquarters

100 Enterprise Drive
PO Box 5055
Rockaway, NJ 07866
973-442-6000

International Sales

100 Enterprise Drive
PO Box 5055
Rockaway, NJ 07866
Fax: 973-442-6083

Sales Offices

For the name of a local Authorized Distributor, visit www.cyro.com or call 800-631-5384.

Plano, TX

101 East Park Blvd.
Suite 1039
972-424-6830

San Ramon, CA

3180 Crow Canyon Place
Suite 240
925-866-9300

Mississauga, Ontario

6285 Northam Drive
Suite 100
905-677-1388
800-268-4743

Fire Precautions

ACRYLITE FF sheet is a combustible thermoplastic. Precautions should be taken to protect this material from flames and high heat sources. ACRYLITE FF sheet usually burns rapidly to completion if not extinguished. The products of combustion, if sufficient air is present, are carbon dioxide and water. However, in many fires sufficient air will not be available and toxic carbon monoxide will be formed, as it will when other common combustible materials are burned. We urge good judgement in the use of this versatile material and recommend that building codes be followed carefully to assure it is used properly.

Compatibility

Like other plastic materials, ACRYLITE FF sheet is subject to crazing, cracking or discoloration if brought into contact with incompatible materials. These materials may include cleaners, polishes, adhesives, sealants, gasketing or packaging materials, cutting emulsions, etc. See the Tech Briefs in this series for more information, or contact your ACRYLITE Sheet Distributor or the CYRO Technical Center for information on a specific product.

Important Notice

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR PARTICULAR PURPOSE IS MADE. Nothing herein is to be taken as permission, inducement or recommendation to practice any patented invention without a license.



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