

Handling and Storage — Reels

Aristech Surfaces Continuous Cast Acrylic Sheet is available either as flat sheet in a variety of standard sizes, thicknesses, and colors, or coiled on returnable reels in several widths, thicknesses and colors. (Contact Aristech Surfaces Customer Service Department for specific information.) Aristech Surfaces Acrylic Sheet reels offer lengths only limited by the practicality of shipping. Custom fabricators can substantially reduce inventories and free valuable floor space for other purposes. Cut-off waste generally experienced with sheet stock can be reduced through careful planning during the cutting operations.

Aristech Surfaces Acrylic Sheet is manufactured and packaged under controlled conditions to assure delivery to the customer of the highest quality continuously cast acrylic sheet possible. Aristech Surfaces Acrylic Sheet reels are delivered with Polyethylene Film Masking for protection against abrasion. Reels are overwrapped with heavy corrugated cardboard and banded for protection.

Aristech Surfaces Acrylic Sheet reels are shipped on four-way entry cradle-skids for ease of handling with either fork lifts or pallet trucks. (See Figure 1 for reel and skid dimensions.)

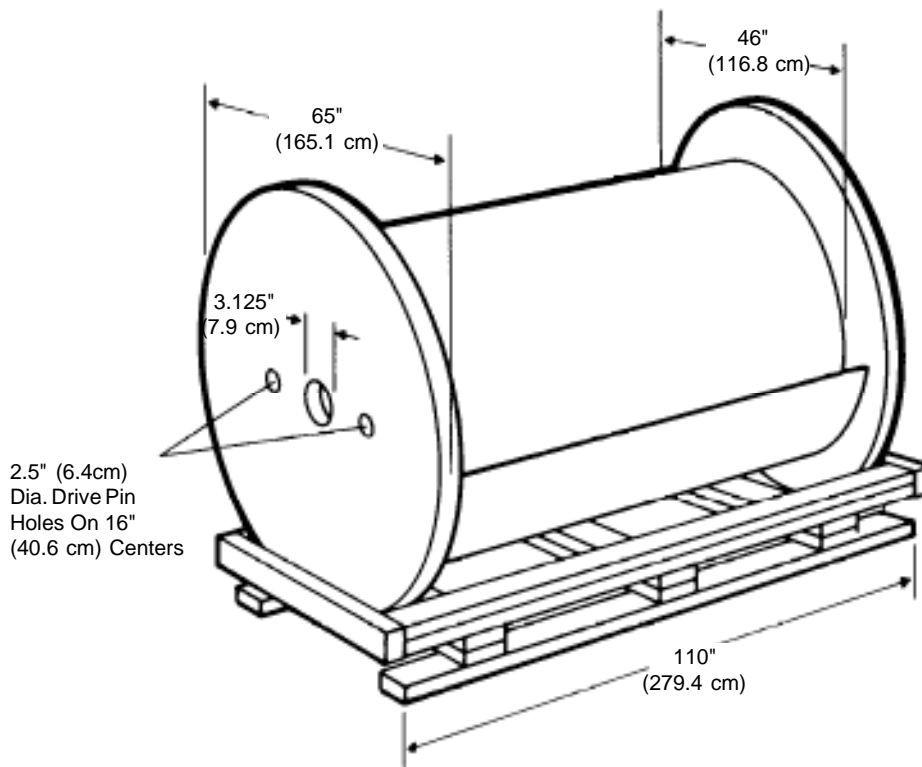


Figure 1 — Reel and Skid Dimensions

Handling

Because of the size and weight of Aristech Surfaces Acrylic Sheet reels, special handling equipment and techniques are required. This bulletin suggests some procedures and equipment that may be used to handle Aristech Surfaces Acrylic Sheet reels efficiently and economically. Fork lift trucks, hand dollies, chain hoists, overhead cranes, and fabric slings are used to handle Aristech Surfaces Acrylic Sheet reels. (See Figure 2.) Reels are usually mounted on an unwind stand by simply inserting a mandrel through the 3.125" (7.9 cm) diameter hole and lifting the reel from the cradle-skid onto the A-frame unwind stand. (See Figure 3.)

After an Aristech Surfaces Acrylic Sheet reel is mounted on a portable unwind stand, it can be moved to a saw table. Best results are obtained with a travel saw equipped with a carbide-tipped saw blade, designed for cutting acrylic sheet. The table should be covered with felt or carpet material to prevent scratches. A hold-down clamp on the reel side of the saw blade should be used. Better results are obtained if the reel is unwound from the bottom. (See Figure 4 for typical sawing arrangement.)

Sheets cut from Aristech Surfaces Acrylic Sheet reels can be handled as regular sheet stock (see Technical Bulletin #132) provided the material is to be thermoformed.

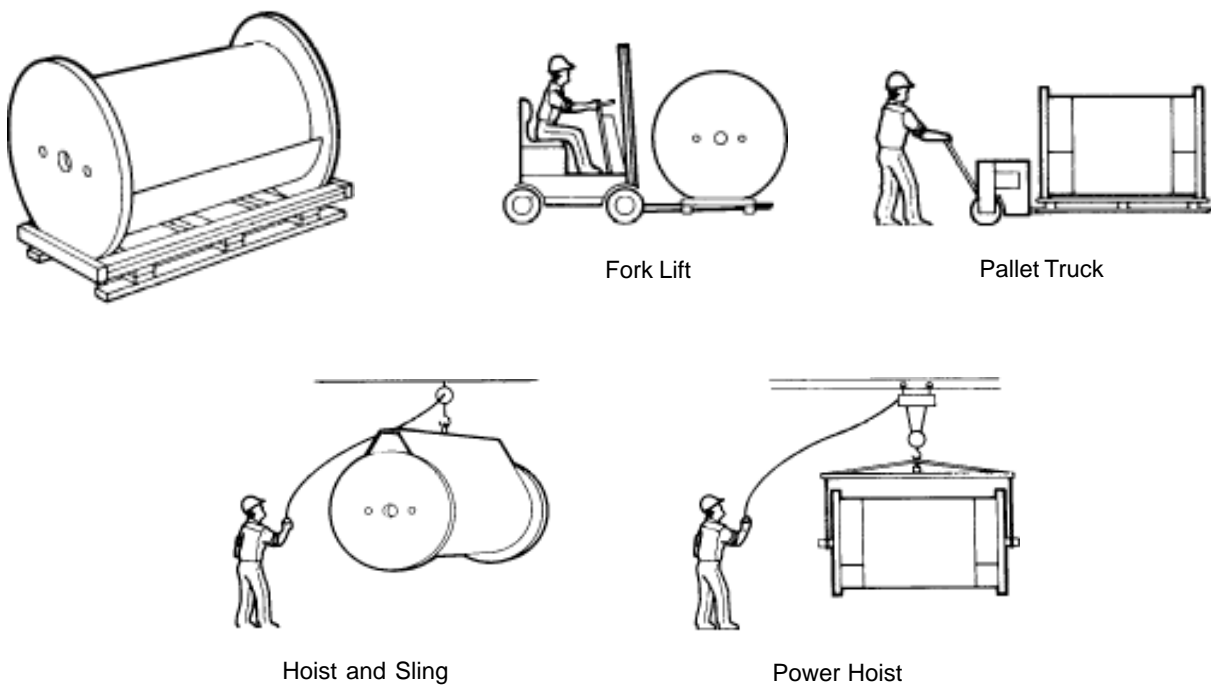


Figure 2 — Method of Handling Aristech Acrylic Sheet Reels

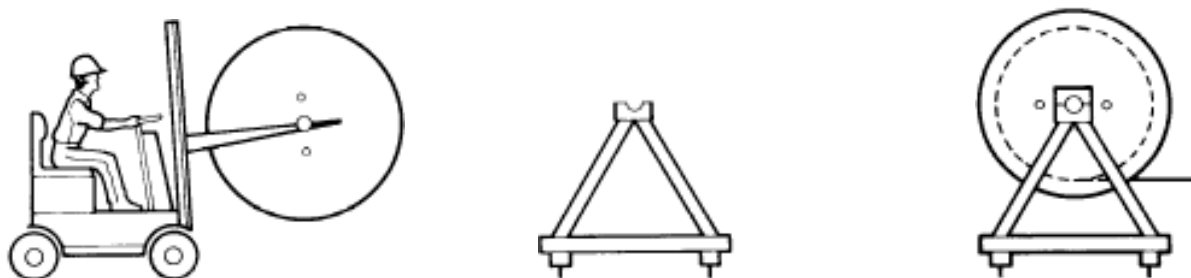


Figure 3 — Method for Mounting Reel on Portable "A" Frame Stand

If the material is to be used flat in large sections (i.e., sign faces, or window glazing), it should be annealed at 170 to 180°F (76.7 to 82.2°C) for one hour for .125" (3.2 mm) thick sheet to relieve internal stresses. For thicknesses up to .150" (3.8 mm), annealing time is 2 hours. From .187" to .250" (4.7 to 6.3 mm), annealing time is 4 hours. Aristech Surfaces SHEET COILED ON REELS CONTAINS INTERNAL STRESSES NOT ORDINARILY FOUND IN SHEET STOCK. THE STRESSES ARE INTRODUCED WHEN THE MATERIAL IS COILED ON THE REEL. IF THE STRESSES ARE NOT RELIEVED THROUGH THERMOFORMING OR ANNEALING, SEVERE CRAZING FROM CEMENTING, PAINTING, OR SILK SCREENING CAN OCCUR. Also, annealing will eliminate the tendency for sheet cuts from reels to want to bow or warp.

Aristech Surfaces Acrylic Sheet reels can be stored as received or on portable A-frame unwind stands. Reels should be stored inside, away from sources of heat and operations involving solvent vapors. OUTDOOR STORAGE SHOULD BE AVOIDED to prevent deterioration of the packaging materials. Also, the outer layer of Aristech Surfaces Acrylic Sheet can absorb moisture which can result in blistering during thermoforming at an unusually low temperature.

Handling Equipment

It is recommended that portable A-frame unwind stands be used to store and carry Aristech Surfaces Acrylic Sheet reels until the material is cut into sheets. The portable A-frame unwind stands can be manually operated or power driven. A typical power driven apparatus is shown in Figure 7. This equipment can be constructed from Aristech Surfaces Acrylic Sheet engineering drawings. Full size drawings will be furnished upon request.

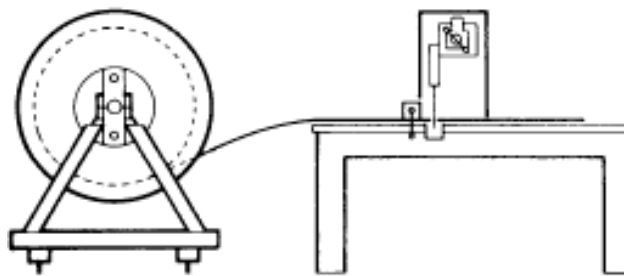


Figure 4 — Typical Travel Saw Cutting Arrangement

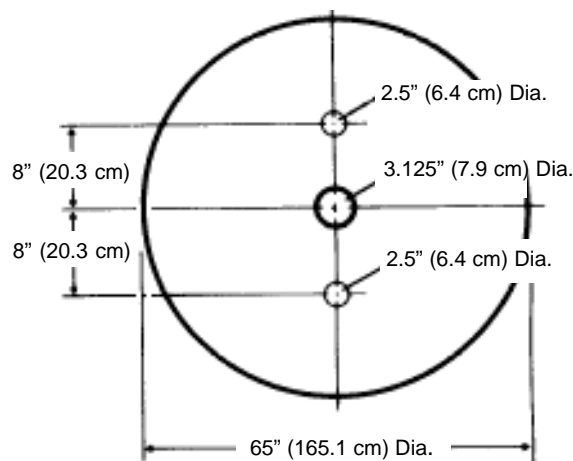


Figure 5 — Wood Reel End. Aristech Acrylic Sheet Detail B-1256

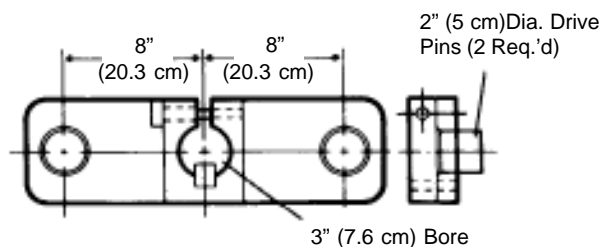


Figure 6 — Clamp Type Drive End. Aristech Acrylic Sheet Detail C-1344

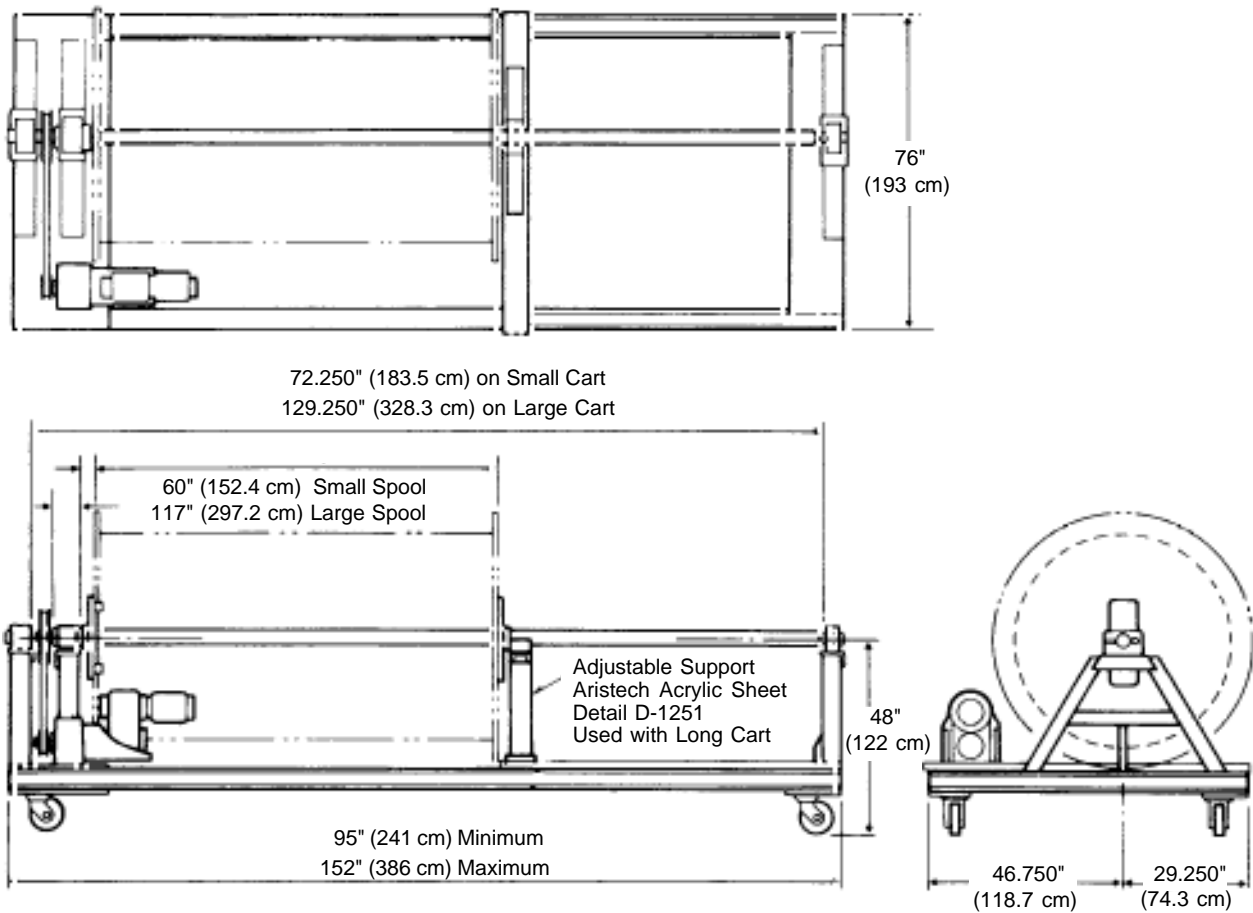


Figure 7 — Power Driven Unwind Stand

For cautions and other information relating to handling of an exposure to this product, please see the applicable material safety data sheet published by Aristech Surfaces.

These instructions are based upon experience with Aristech Surfaces products only. Experience with products of other manufacturers is specifically disclaimed. For most uses, check for local code approval and test for application suitability. These procedures, techniques and suggested materials should only be used by personnel who are properly trained in the safe handling of the chemicals and the equipment with which they are working. Avoid aromatic solvents, clean with mild soap and water, avoid abrasives. These suggestions are based on information believed to be reliable, however, Aristech Surfaces makes no warranty, guarantee, or representation and assumes no obligations or liability as to the absolute correctness or sufficiency of any of the foregoing, or that additional or other measures may not be required under particular conditions or circumstances.

