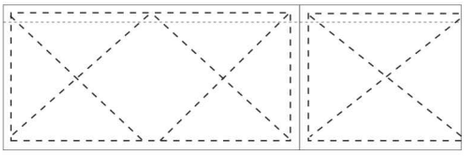
UHMW Polymer is lightweight (¼" thick x 4'x10' sheet and weighs approximately 50 lbs.) and can be handled by one or two people. It can be cut and drilled with normal metal or woodworking tools.

It is important that UHMW Polymer be securely fastened to the substrate.The linear expansion (.00013" per inch / per degree C.) creates a force that moves the sheet. Proper spacing of fasteners according to the sheet thickness will overcome this force and hold the sheet flat against the substrate.

Improper fastening will result in surface ripples and gaps where sections are joined. Surface ripples will show excessive wear. Material temperature should be 20^0 - 24^0 C. during installation.

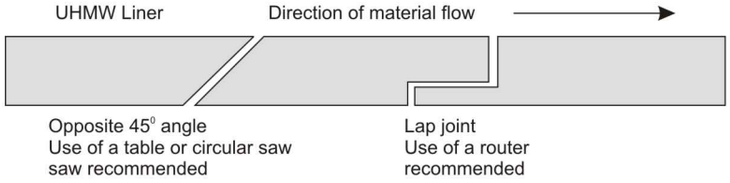
It is recommended that sheets be held in place with mechanical fasteners. Correct spacing of fasteners is in relationship to the thickness of sheet.

Sheet Thickness	Recommended Spacing of fasteners (on centers)
1/4"	6" - 8"
3/8"	8" - 10"
1/2" / 5/8" / 3/4"	12" - 15"
1" and over	15" - 20"



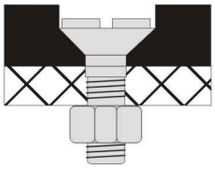
For all thicknesses, fastening devices should be no further than 2" from any edge. It is important to tighten fasteners to hold the liner securely against the substrate. The correct spacing and strength of the fasteners will minimize the warpage due to its linear thermal expansion properties. Where two sections are joined, butt the edges together as tightly as possible.

To allow for the linear expansion and contraction, we recommend the following joining methods for UHMW sheet:



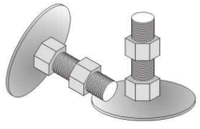
SUGGESTED FASTENING METHODS

NUT & BOLT



ELEVATOR BOLTS

DRIVE RIVETS

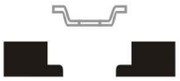


ELEVATOR BOLTS

CUTTER

1. DRILL FASTENER HOLE IN UHMW MATERIAL WHERE CONVENIENT

WASHER



2. HOLD THE MATERIAL IN PROPER POSITION

WELD, SCREW RIVET, NAIL

3. CENTER THE WASHER TO ALLOW THE MAXIMUM MOVEMENT IN ALL DIRECTIONS

STAINLESS STEEL

FLATHEAD BOLT

Use a bolt with a diameter similar to the drilled hole. The diameter of the hole should be a minimum of 1/8" larger than the bolt size. The bolt head should have a washer to prevent pull-out.

ELEVATOR BOLTS are very popular fasteners. The most common size is 1/4". These bolts have a flat head that can be countersunk into 3/8" thick sheets or can be flush mounted on 1/4" thick sheets. They give maximum holding power and are easy to install and remove when replacing the liners. Bolt diameters 1/4", 5/16" and 3/8" are available in lengths from 3/4" to 2-1/2".

STAINLESS STEEL FLATHEAD BOLTS offer better abrasion and corrosion resistance and are preferred over mild or carbon steel bolts. The flathead shape allows the bolt to be flush with the surface. Liners are easy to install and remove when replacement is necessary. These fasteners are normally used to hold thicker sheets (from 3/8" to 1" thick).

DRIVE RIVETS are used for blind fastening to metal and less dense materials such as wood. The correct size rivets are selected according to the combined thickness of the sheet and substrate. Rivets are placed in pre-drilled holes and struck with a hammer. The rivet will flare out and secure the UHMW to the substrate. This method is very fast, effective and ideal for blind fastening or "hard to reach" areas.

GENERAL: For chains that run in one direction a wear strip may be fastened at the drive end and allowed to float. Remember to allow for expansion. UHMW will degrade in direct sunlight. Use caution when installing in outdoor applications.