

## Recommended Polyolefin Sheet Bending Radius

Polyolefin sheet is manufactured in 3' x 4' flat sections and in 4' x 50' continuous rolls. Consult the current appropriate price list for available thicknesses. There is a loss in sheet flexibility with increasing thickness. In applications where polyolefin sheet products will be wrapped around pipe or round ducts to provide required insulation thickness, the degree of flexibility should be considered<sup>1</sup>.

The following table provides recommendations for the minimum pipe or duct O.D. corresponding to sheet thicknesses which can be effectively installed:

<u>Thickness</u>	<u>Minimum O.D.</u>
3/8"	5"
1/2"	6"
3/4"	10"
1"	12"
1-1/2"	32"
2"	48"
2-1/2"	60"

### Engineering Note:

For 3/4" thickness and higher a ship lap joint incorporated into the longitudinal seam will provide an effective method for alignment and a more resilient seal. If using 3/8" or 1/2" thick sheet a bevel joint for the longitudinal seam is satisfactory, provided sufficient adhesion between the sheet and the pipe/duct and/or the adjacent sheet are employed. Factory recommended practices such as coating both sides of a contact adhesive seam and allowing proper flash time ("tack") should be followed. Note that each sheet has one factory roughened side specifically prepared for contact adhesive application. The factory roughened side will have a label stating "apply adhesive this side".

In applications where the insulation thickness being installed on a pipe is greater than the recommended minimum bending radius, it may be preferable to install multiple layers of a lesser insulation thickness (e.g. two 1/2" layers instead of a single 1" layer).

<sup>1</sup> In some cases other methods such as banding can be used to obtain a satisfactory fit on O.D. below the recommended minimum. The end user will need to verify the applicable banding design through field testing. However, it is possible that the polyolefin sheet will crimp and collapse if forced to conform to a very tight radius (i.e. an O.D. below the recommended minimum). In these cases, the use of a v-groove tool (available from equipment suppliers such as Amcraft) may be used to remove enough insulation to prevent excessive compression. If this method is used, it is important to test fit to insure that there are no gaps in the insulation as this could result in a thermal short and lead to excessive heat loss and / or condensation.