

SPECIALTY PACKAGING PLASTICS

APET (amorphous polyethylene terephthalate) film and sheet extruded from **Eastapak** PET polyester can be thermoformed and fabricated when proper equipment and operating techniques are used. Listed below are some "Do's and Don'ts" that should be helpful in processing. For more detailed information, see Publication TRS-111, *Thermoforming Amorphous PET*.

Thermoforming APET Sheet

Do

- Use moderate heat settings on the thermoforming equipment to give a sheet temperature of 140° to 165°C (280° to 325°F). Installation of a temperature-sensing device is recommended to monitor sheet temperature as it enters the mold.
- Use mold temperatures in the range of 40° to 60°C (100° to 140°F).
- Use shorter forming cycles and lower temperatures than those used in thermoforming other films such as PVC.
- Use silicone-coated film for optimum denesting of blisters.
- Use Eastman denest concentrate when silicone coating is not allowed.

Don't

- Overheat sheet. Crystallization will occur if the sheet is overheated, resulting in whitening and embrittlement of the sheet. Excessive sag with resultant webbing can occur.
- Use cold molds. Mold temperatures as low as 20° to 25°C (70° to 80°F) can cause "freezing" of the film and nonuniform drawing. This is especially true when using male molds.
- Use sheet temperatures below 140°C (280°F). Due to freezing internal stresses in the part, cold forming can cause embrittlement.

Cutting APET Sheet

Do

- Use properly guarded roller-die, matched-die, slitters, or guillotine cutters for maximum tool life.
- Use sharp and well-maintained cutters.
- Make sure that proper clearance is maintained between punch and die (usually zero) when matched-die cutters are used.
- Cut completely through the sheet to cleanly separate the parts.
- Use a mild or stainless steel surface with a hardness less than that of the die for the backing plate when using steel-rule dies.
- Use a make-ready procedure (see Publication TRS-111) for proper tooling setup.

Don't

- Trim formed blisters if the temperature of the sheet is above 65°C (150°F).
- Attempt to trim formed blisters unless the equipment and die perimeter are such that the available cutting force is at least 185 pounds per linear inch.

Conversions of metric/U.S. customary values may have been rounded off and therefore may not be exact conversions.

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Material Safety Data Sheets providing safety precautions that should be observed in handling and storing Eastman products are available on request. You should obtain and review the available material safety information before handling any of these products. If any materials are mentioned that are not Eastman products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

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