



U.S. PLASTIC, INC.

Guidelines for Preventing “Heat Damage” to PET Containers

Theoretically, PET material begins to shrink (deform) at 178 degrees F. This is in a controlled environment with set parameters and in the absence of direct sun light. Unfortunately, no finished PET container is ever manufactured within this same controlled environment and set parameters. It is for this reason that different PET containers shrink at a wide range of temperatures. None, unless they are “heat set” can reach 178 degrees and few even come close. “Heat set” is an entirely different process from the “biaxial orientation” process, which is the process used by most manufacturers of PET containers.

The reasons for such a wide range of shrinkage temperature are many: type of conversion (manufacturing) equipment, IV (intrinsic viscosity) of the resin, the amount of stretch or biaxial orientation, gram weight, wall thickness, design, just to mention a few.

The following guidelines will aid you in protecting the integrity of PET containers:

1. PET is a heat sensitive material.
2. PET container cannot be used for “hot fill” applications. Any fill requirement above the ambient should be completely tested first from filling through shipping and delivery.
3. PET containers, depending on many factors, can begin to shrink anywhere between 100 and 160 degrees F.
4. All users of PET containers should assure, throughout the entire handling process, that their containers are not exposed to temperatures above 115 degrees F.
5. NEVER place or store PET container in direct sunlight, even on a cool day. This includes inside under the skylights or close to non-insulated roofs.
6. Unload trailers of PET immediately on hot summer days. Please strive to make this a process on all loads regardless of the season. US Plastic, Inc. is not responsible for heat damage to containers after they are loaded and depart from our loading dock.

Heat Damage Containers are a ‘defective product’ caused by conditions not present in the bottle making or US Plastic storage and handling process. US Plastic, Inc. will not be held responsible for any defective product caused by heat damage.

Thank you for your business, it is truly appreciated. Please contact us if you have any questions.

Quality Assurance Department,
US Plastic, Inc.
[951-300-9360](tel:951-300-9360)

