

# Storage & Handling Conditions for HDPE Bottles



Bottle storage conditions such as time, temperature, and humidity can have an effect on HDPE containers. The exposure and age of a sample can also affect the shrinkage, impact properties, and stress crack resistance of the container.



**Storage Time** – The storage time of unfilled bottles should be minimal. Maintain a strict first-in first-out inventory. Many end users will re-approve bottles after two or three years of storage.



**Storage Temperature** – Elevated storage temperatures allow HDPE containers to further shrink and harsh conditions can actually cause severe distortion. The degree of distortion and shrinkage depends on the bottle design and storage conditions. Higher storage temperatures also accelerate the aging process of the container. Provide a moderate storage temperature to ensure consistent bottle dimensions and properties. It is reported that HDPE bottles can withstand temperatures of 110°F for brief periods.



**Storage Conditions** – Although humidity itself will not degrade the HDPE container, a humid environment can have a direct impact on the secondary packaging, such as cardboard cartons. Stretch wrapping and/or controlling warehouse conditions helps alleviate secondary packaging problems.



**Surface Contamination** – Keep bottles as clean as possible; leave bottles in original sealed cartons. Keep storage area clean, dry, dust, odor, insect, and rodent free.

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