

TECHNICAL ASSISTANCE BULLETIN



TOPIC: CASELESS DAIRY PALLET GUIDELINES

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Purpose

Caseless packaging for Gallon Bottles is an innovative new technology that eliminates the need for the traditional plastic cases and secondary handling. The bottles now will bear the load of the pallet in place of the plastic cases. To ensure the success of this technology Silgan Closures has extensively tested the technology and support its use.

The stacking layers generate internal pressure, which near 1psi (0.07 Bars), through top load reaching 26-27 pounds (11.8-12.2 Kg) applied to the shoulders of the bottle (Figures 1 and 2). Performance of the closures' ability to maintain its seal, while palletized using the caseless method, is reliant on several factors that are described below.

Closures Approved for Packaging Using Caseless Stacking

- 38mm DBJ, DBF, ISF, ISO, ISS, SSJ

Stacking Recommendations

- 4 layers per pallet (Figure 1)
- Single pallet stacking in warehousing (Figure 4, excessive tension)
 - Sufficient tension should be applied to ensure the pallet contents will not shift while not creating damage to the contents of the pallet.

Bottles

- Quality – Every effort should be made to ensure that the bottle finishes are of the highest quality and there should be no defect such as the following:
 - Mold part mismatch cannot be present.
 - Finish nicks or chips cannot be present.
 - Finish ID (inside diameter) flash cannot be present.
- Design – the following should be taken into consideration when planning to implement this type of stacking:
 - Geometry
 - Gram Weight
 - Top Load Ability

Tray Design

- Must provide even weight distribution across the bottle shoulder, handle and top of closure (Figure 3).



Figure 1: Proper caseless stacking procedure



Figure 2: Proper load application to the bottle shoulder



Figure 3: Proper tray design for even weight distribution



Figure 4: Example of excessive shrink wrap tension

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