

WHITE PAPER

**O-WRAP
OVERWRAP SEALER
RECOMMENDATIONS**

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Overwrap Selaer Recommendations

SEALING METHODS

Heat Sealing

O-Wrap bags are made of a proprietary EVO material and is able to be heat sealed. OriGen has internally validated the following heat-sealing conditions for O-Wrap bags on the Van der Ståhl MS-350 jaw sealer (series G):

Product	Heating Temp (°F)	Heating Time (sec)	Cooling Temp (°F)
O-Wrap	220°F	3.0 sec	104°F

Note: Settings and temperatures may vary by equipment models and units. Validate all processes before use with O-Wrap bags.



Impulse Sealing: O-Wrap bags may also be sealed by impulse sealers. All impulse sealers are different and it is up to the user to validate equipment settings for use with O-Wrap bags. Potential sealer option includes the Uline H-190 Impulse Sealer.*



**Impulse sealer not formally qualified by OriGen for sealing operations with O-Wrap Overwrap Bags*

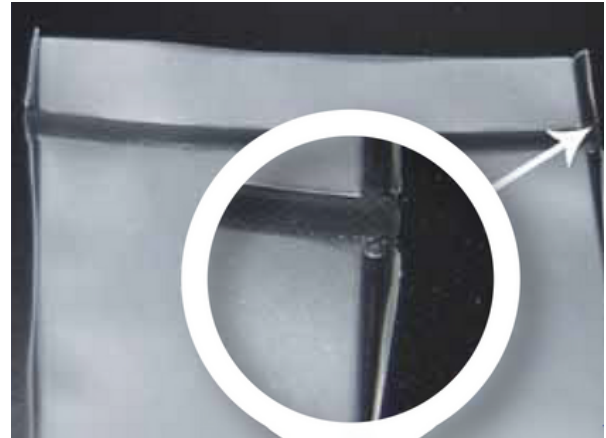
Overwrap Sealer Recommendations



TEST PROCEDURE

For instructions on how to use O-Wrap bags, see the IFU booklet provided with each product package.

Lay the O-Wrap flat across the middle of the sealing bar on the equipment; avoid folds or curved edges. Check to ensure the sealer produces a clear, consistent seal from edge to edge. The O-wrap bags may be trimmed using a sharp blade or scissors, if necessary.



COMMON SEAL FAILURES

Poor seals (i.e., incomplete, folded, or imperfect) can result in gaps and channels that allow LN to enter the O-Wrap pouch. The liquid nitrogen could rapidly expand when thawed and cause bursting or fractures of the O-Wrap and cassette.

Incomplete

Problem: Placement error on the heat element caused the seal to fall short of the O-Wrap edge.

Solution: To prevent this, position O-Wrap in the middle of the heating bar prior to sealing.



Folded

Problem: Fold in seal leaves a potential pathway for liquid nitrogen to enter.

Solution: Ensure the bag is laid flat across the bar sealer prior to sealing.



Imperfect

Problem: Heat is set too low to melt two sheets of EVO, specifically at the edges. Cloudy throughout seal, slightly ridged at the edge of the seal and a small channel exists where the seal meets the edge.

Solution: Increase heat setting or sealing time (above 220°F).

