

# Fittings - Seal Integrity

Valcor Scientific

## BACKGROUND

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in applications where PTFE valves exhibit external leakage that are eventually traced to fittings (i.e. incorrectly specified size, numbers of threads, form, etc.) or over-tightened fittings (fittings must only be hand tightened), there is another possibility often over-looked.

## CAUSE

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If those fittings were correctly specified and were hand tightened, the leakages maybe the result of inappropriately meshing thread forms between the male threads of the fitting(s) and the female threads of the valve port(s); that is, the spaces and voids that occupy that mesh.

## REMEDY

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When total seal integrity is absolutely necessary, we recommend using Valcor Scientific's positive sealing fittings.

When low cost molding fittings are used, there's no need for PTFE tape. We suggest a two-part adhesive consisting of resin epoxy and hardener, available from any hardware store. Specifically: '2-Ton Epoxy'.

The epoxy fills the voids in the mating threads and does not stick to the PTFE material.

## PROCEDURE

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Follow the instructions according to the adhesive manufacture.

Using a straightened paperclip (or similar device), mix the two-part adhesive.

Apply no more than the equivalent of one dropful of adhesive on the threads of the fitting.

Screw the fitting into the port and hand-tighten only.

Allow time to dry as prescribed in the instructions accompanying the adhesive.

Should removal be required, simply unscrew the fitting(s) and most of the epoxy will peel away.

