What is claimed is:

1. An intravenous tubing set comprising:

a coupling component for accessing a source of flush solution;

a flush chamber;

one or more IV tubing connecting the source of flush solution, the flush chamber and a patient catheter; and

one or more flow control devices disposed in the IV tubing between the source of flush solution and the flush chamber to control the flow of flush solution into the flush chamber;

wherein the flush chamber comprises one or more sheets of flexible plastic film;

wherein the one or more sheets of flexible plastic film are heat-sealed to form the flush chamber.