



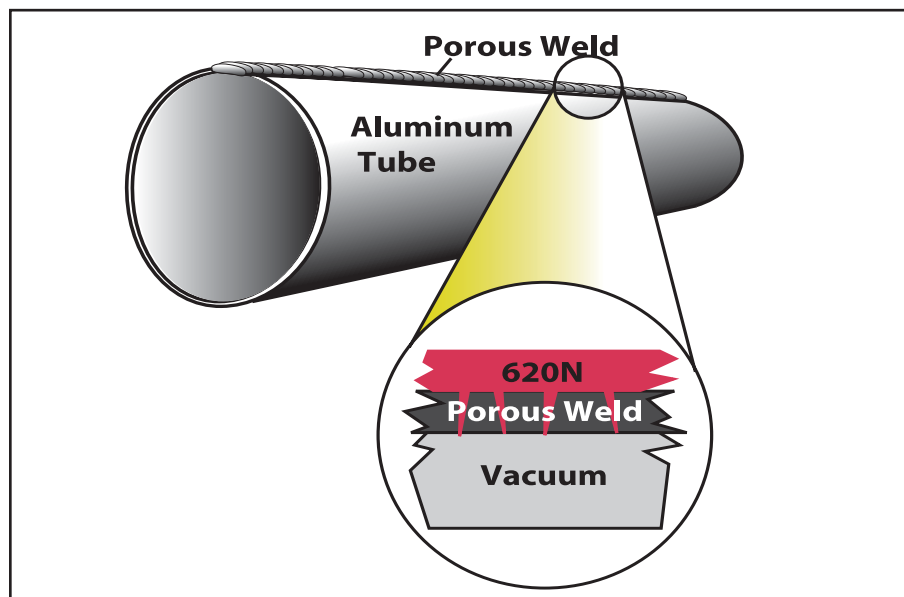
COMPOSITE TECHNOLOGY DEVELOPMENT, INC.

Technical Data Sheet

CryoBond™ 620N

CryoBond™ 620N cryogenic adhesive is an epoxy based system supplied in two parts. It is designed for adhesion to various substrates (metals, composites, and ceramics) and to withstand thermal cycling to cryogenic temperature. The system can be mixed at room temperature and applied in high humidity environments. CryoBond™ 620N will cure at room temperature, but an elevated temperature may be necessary if used as an adhesive film. Designed to adhere well to minimally prepared surfaces, best results are achieved with adhesion to well prepared surfaces.

CryoBond™ 620N has found application where many other adhesive systems failed, primarily due to its low viscosity and ability to wet surfaces. CryoBond™ 620N has also been used as a leak stop for cryogenic piping. It was first used for this application by Ability Engineering Technology, Inc. who was using a seam welded aluminum tube that was operated at 4 K. The seam weld was porous and would not hold vacuum. A thin layer of CryoBond™ 620N was applied to the weld, and a slight vacuum was applied to the tube to draw the low viscosity adhesive into the pores. After allowing the CryoBond™ 620N to cure, the pipe met its vacuum tight requirements at 4 K.

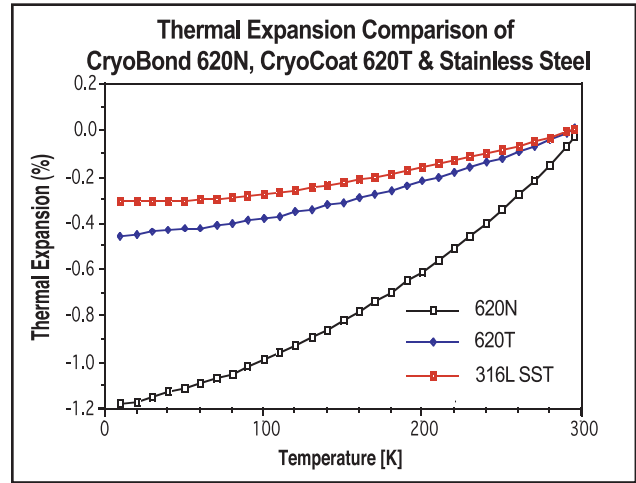
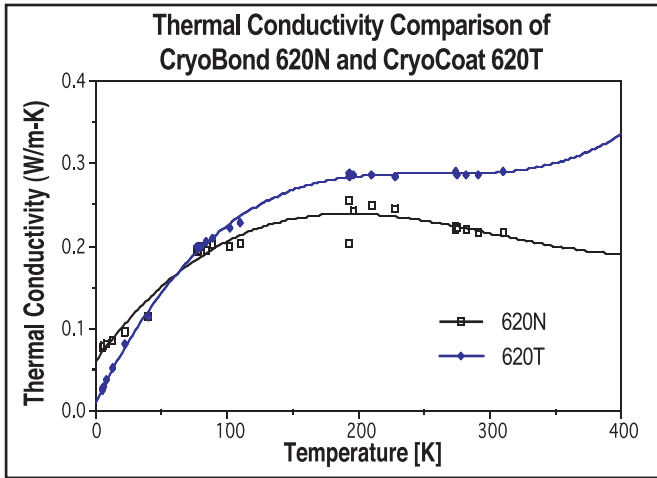


Porous weld in aluminum tube sealed with CryoBond™ 620N and subsequently operated at 4K by Ability Engineering Tech, Inc.

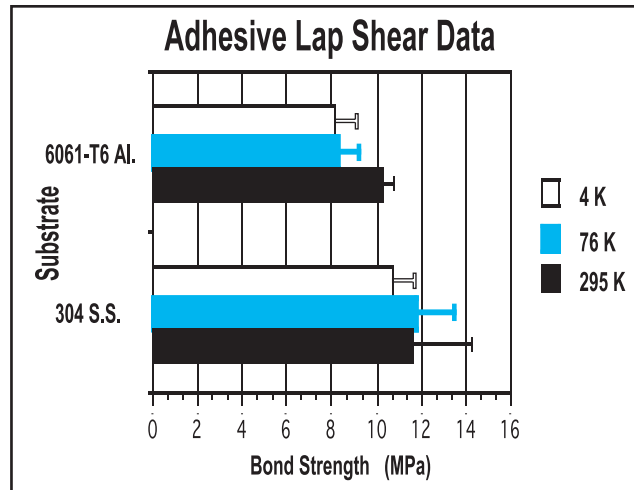
CryoBond™ 620N was developed as the base resin for CTD's CryoCoat™ 620T, which is a syntactic foam cryogenic insulation. CryoBond™ 620N will provide similar adhesive performance characteristics to CryoCoat™ 620T.



Performance Characteristics of CryoBond™ 620N



Shear Properties of 620T (should be similar to 620N)



Disclaimer: The information and recommendations contained herein are based upon data believed to be accurate. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein.