

FILL FLUID SPECIFICATIONS – GLYCERIN AND WATER

Temperature Limits:

At Atm Pressure: -17 to 93°C (0 to 200°F)

Viscosity at 25°C(77°F): 12.5 cs

Specific Gravity @ 25°C(77°F): 1.13

Coefficient of Thermal Expansion: 0.000342 cc/cc/C (0.00019 cc/cc/F)

Chemical Composition: 50% glycerin and 50% water (by volume)

CAS Number:

Description/ Applications: Glycerin is commonly used in many food, pharmaceutical, and cosmetic products. Glycerin is mixed with water in order to decrease its viscosity. Being a Generally Recognized As Safe (GRAS) substance, it may be used as a fill fluid in food, beverage, dairy, and pharmaceutical applications. Since it has a low coefficient of thermal expansion, it is also a good choice in applications requiring high performance as long as the temperature limits are not exceeded. FDA Code of Federal Regulations reference number: 21CFR 182.1320.

USP grade: These chemicals are manufactured under current Good Manufacturing Practices (cGMP). These materials meet the requirements listed in the United States Pharmacopeia (USP). The USP lists each chemical along with certain specifications the product must meet in order to be considered a USP product.

FCC grade. These products meet the specifications listed in the Food Chemicals Codex. This is a book of specifications written by the Food and Nutrition Board, the Institute of Medicine, and the National Academy of Sciences. The chemicals that carry the FCC name are considered "Food Grade."

A vapor pressure curve does not exist for Glycerin and water.