

CHEMICAL Specialties, Inc.

A total solution for your heat transfer,
fluid inhibitor and testing needs

Product Warranty

Chemical Specialties encourages the use of our pre-blended fluids to ensure that systems contain only the highest quality ingredients, including the water used for dilution. We cannot be responsible for situations arising from the use of poor quality mix water or blending with other types of chemicals.

Product Usage and Dilution Water Quality for all Chemical Specialties Fluids

Dilution Water Quality

Water used to dilute Chemical Specialties fluids must meet certain minimum standards for purity. Impurities in dilution water can increase metal corrosion, aggravate pitting of cast iron and steel, reduce the effectiveness of corrosion inhibitors, increase inhibitor depletion rate, cause formation of scale and other deposits on heat transfer surfaces, and cause clogging of system components.

To assure inhibitor effectiveness, the levels of chlorides and sulfates in water used to dilute Chemical Specialties fluids should be less than 25 ppm each. Total hardness should be less than 100 ppm expressed as ppm calcium carbonate. (See Tables on product label). Distilled or deionized water is recommended. If good quality water is unavailable, pre-diluted solutions of fluids are available from Chemical Specialties.

Note: Use of well water will void all warranties.

To ensure maximum effectiveness for corrosion protection, the inhibitor package is designed for a minimum 25-30 volume percent concentration of glycol in water.

Solution Make-Up

As indicated above, good quality water must be used for fluid make-up. In addition, any flush water remaining in the system should be taken into account when introducing and diluting Chemical Specialties fluids. In an industrial system, it is not unusual to have left

over flush water of up to 20 percent of the total system volume, although 10 percent is more common.

Introducing Chemical Specialties Glycol Fluid Products into Your System

In most cases, solutions containing glycol-based heat transfer fluid are mixed on a volume basis. If you wish to mix by weight percent, use Table 2 to obtain the volume-to-weight conversion. Following is the mixing procedure for installing these fluids:

1. Calculate the quantity of fluid needed to achieve the desired results. Table 5, which provides the number of gallons per 100 feet of pipe, may be helpful in the calculation.
2. Introduce a sufficient quantity of water to check the system for tightness. Pressure testing the system at this stage can be helpful. Often pressure testing can be accomplished during the initial cleaning or flushing of the system.
3. Drain enough water from the system to provide space for the inhibited glycol quantity as calculated in Step 1.
4. Add the correct amount of fluid and any water needed to completely refill the system, allowing for liquid expansion as needed due to the operating temperature.
5. Circulate for at least 24 hours to ensure complete mixing. Check the liquid concentration with a refractometer or other method to assure that the correct mixture is obtained.

Increasing or Decreasing the concentration of Inhibited Glycol in the System

It is sometimes necessary to increase the concentration of the glycol solution in your system, either to protect against cold weather, or to replace fluid lost through leakage or moisture absorbed from the atmosphere. There are other conditions which may require the dilution of inhibited glycol already in the system. Either adjustment can be carried out in batch or continuous operation.

Mixing Chemical Specialties Fluids with other manufacturer's products

Chemical Specialties fluids are formulated using proprietary corrosion inhibitors for assurance of materials compatibility and non-toxicity characteristics. Dilution and mixing of Chemical Specialties fluids with other manufacturer's products may compromise these critical requirements, is not recommended, and may void any warranty.

DISCLAIMER: Our suggestions and data are based on information we believe to be reliable. Users should verify by tests that this product, as well as these methods, are suitable with the products being used in their application. Since specific use, materials, and handling are not controlled by Chemical Specialties, our warranty is limited to replacement of defective products only. Chemical Specialties disclaims any

responsibility for any (a) warranties or merchantability and fitness for purpose; (b) verbal recommendations of its representatives; and (c) consequential damages