7. DYN-O-FLO HD

7.0. General Dyn-O-Flo HD Notes

Dyn-O-Flo HD is a 100% concentrate inhibited propylene glycol and is recommended for use in applications where low acute oral toxicity is important or where incidental contact with drinking water is possible. Extra strength corrosion inhibitors in the HD fluid are formulated for high temperature use, resulting in reduced maintenance and longer inhibitor life in most applications.

7.0.0. Use Directions

- Do not use full strength.
- Recommended concentration is 40 – 60%.
- Dilute with good quality soft water. If the tap water has more than 25 ppm of chloride or sulfate ions, or more than 50 ppm of calcium or magnesium, use mountain spring water.
- Do not use zinc or galvanized components in contact with the fluid.
- System preparation: Flush thoroughly with water (use 1 – 2% TSP) and circulate without adding heat, before introducing the operating fluid.
- Fluid Introduction: Please see the Helio-Pak systems Manuals for filling, venting and priming.
- Maintenance: The fluid should be checked periodically for pH, which should not drop below 8, and reserve alkalinity, which should stay greater than zero at all times.
- Flush thoroughly before replacing with new mix.
- The Dyn-O-Flo HD has an operating temperature range of -50 – 325 ˚F.

7.0.1. Specifications

- *Specific Gravity:* 1.053 – 1.063
- *Propylene Glycol:* 94%
- *Inhibitor Concentration by Weight:* 6%, inhibitors and water
- *Dye:* Bright yellow
- *Suspended Solids:* substantially free
- *Reserve Alkalinity:* 15 mL

7.0.2. Values at 50% Concentration

The listed values are typical of a 50% by volume aqueous solution at 120˚ F and should not be regarded as specifications.

- *pH:* 9.5 – 10.5
- *Specific Heat:* 0.842 *BTU / lb ˚F*
- *Freezing Point:* -30 ˚F
- *Burst Protection:* < -60 ˚F
- *Viscosity*: 2.36 Cps

7.0.3. First Aid

While essentially non-irritating, absorbing or toxic, Dyn-O-Flo HD heat transfer fluid should be kept away from children and be treated with care. In case of physical contact, follow these directions:

- *Eyes*: Flush with plenty of water
- *Skin*: Wash off with flowing water
- *Ingestion:* Induce vomiting and consult a physician
- *Inhalation*: Remove to fresh air, consult physician.

Notice to Physician: No specific antidote. Supportive care based on judgment of physician.

7.0.4. Handling

- *Exposure Guidelines:* Propylene glycol: AIHA WEEL is 50 ppm total, 10 mg / m^3 aerosol only.
- *Ventilation*: Good general ventilation should be sufficient for most conditions.
- *Respiratory Protection:* No respiratory protection should be needed.
- *Skin Protection*: For brief contact, no precautions other than cleaning of body and covering. Use impervious gloves when prolonged or frequently repeated contact occurs.
- *Eye Protection*: Use safety glasses.
- *Spills*: Cover with absorbent material, soak up and seep into bag.
- *Disposal*: Discharge into sanitary sewers only with the explicit pre-approval of the local waste water facility. Any disposal practice must be in compliance with federal, state, provincial and local laws and regulations. Check with the appropriate agencies.

7.0.5. Maintenance

The glycol / water mix should be tested periodically for freeze protection and pH. Empty the system and flush thoroughly before replacing with a fresh mix when the pH drops below 8, or reserve alkalinity approaches zero.