

## OPTISHIELD® DIRECTIONS FOR USE

**OPTISHIELD®** is a liquid water additive formulated to provide corrosion protection for a broad range of materials in “closed circuit” re-circulating systems. OPTISHIELD® is suitable for use in most “new” and “existing systems” when used in accordance with directions. However when used with existing systems which may contain excess scale, oxidation, and sediment, it may be advisable to first flush the system with a mild cleaning agent. Contact your equipment manufacturer and/or OPTI TEMP for recommendations on appropriate cleaners.

**Shelf Life:** Recommended shelf life (mixed or concentrate)-fluid can be stored for a period 15 months from package date when stored in accordance with Opti Temp’s storage guidelines.

**Storage:** Keep container closed at all times when not in use. Store in a cool area above 60°F. Do not allow fluid to freeze. Store where direct sunlight cannot reach the product container.

**Caution:** Some cleaners and/or additives can be harmful to certain system components. Check with the equipment manufacturer for compatibility with the system before using OPTISHIELD® or any other additives. Use of unapproved products may void your equipment warranty.

**Filtration:** It is strongly recommended that particle filtration be installed on all re-circulating systems, particularly for those systems where corrosion, scale, and other containments may already exist. Use of OPTISHIELD® will tend to loosen and free containments over time. **TO PROTECT PUMPS, SEALS, AND OTHER COMPONENTS INSTALL FILTERS ON THE RETURN SIDE OF THE SYSTEM!** Please note that filter type and minimum recommended particle sizes may vary by application. Contact your equipment manufacturer or OPTI TEMP engineers for more information and recommendations.

**Caution: READ Instructions for use and Material Safety Data Sheet thoroughly before handling OPTISHIELD®.**

### Directions for New Systems “First Time Use”

Note: If system is an existing system with a known corrosion problem, the system should first be treated and flushed with a mild cleanser. Contact OPTI TEMP for more details.

1. Flush cooling circuit with distilled water.
2. Calculate system capacity/volume in gallons. Fill cooling system with a 5% solution of OPTISHIELD® and distilled water. (Example: 1 gallon of OPTISHIELD® to 19 gallons of water for first “coating cycle”)
3. Circulate this solution for about 30 minutes.
4. Drain fluid\*.
5. Fill cooling system with a 10% solution of OPTISHIELD® and distilled water. (1 gallon of OPTISHIELD® to 9 gallons of distilled water)
6. Change fluid as directed by OPTI TEMP INC.

### Directions “After First Time Use”

1. Drain used fluid from system\*.
2. Fill cooling system with a 10% solution of OPTISHIELD® and distilled water. (1 gallon of OPTISHIELD® to 9 gallons of water)
3. The system is ready for use.

\*Dispose of according to local, state, and federal regulations.

### WHEN DO I CHANGE THE OPTISHIELD® SOLUTION?

OPTI TEMP INC. recommends changing the OPTISHIELD® solution annually. **Failing to change the solution when prescribed can lead to serious corrosion problems.** Please follow all directions.

The time between successive changes generally depends on three main factors:

1. The types of dissimilar metals in the system.
2. The temperatures encountered by the solution.
3. The number of hours per day the fluid is circulated at the above temperatures.

OPTI TEMP, INC. can recommend a schedule for your system.

### HOW AND WHEN DO I CHECK THE OPTISHIELD® SOLUTION?

During the first 4 weeks it is best to check the system weekly, if not more often, for CLARITY. This can be done by taking a small sample of the fluid and holding it up to the light to make sure there are no precipitates (solids) in the solution. If any precipitates (or a cloudy solution) are found, the solution should be drained following the “Directions For Use of OPTISHIELD®”.

The solution should also be tested for pH level. **The pH should not fall below pH=9.** If the pH=9 or less, drain the system and follow the “Directions For Use of OPTISHIELD®”.

If, after one year (or the prescribed time OPTI TEMP recommended for your special application) your solution is still clear and the pH=9 or above, we recommend that the fluid still be changed out. The clarity and pH tests are to be used as guidelines for solutions that need to be changed before the specified time period.

### CONDUCTIVITY REQUIREMENTS

If your system has low electrical conductivity requirements, please contact OPTI TEMP INC. for recommended concentrations of OPTISHIELD® and relevant instructions.