

## **IMPORTANT NSF COATING APPLICATION GUIDELINES**

Ameron has received certification of several coating systems from the National Sanitation Foundation for use as linings in drinking water applications. These product formulas must be maintained and tested on a regular basis to ensure they remain in compliance with the guidelines of EPA / ANSI Standard 61. The testing ensures that any extractable compounds from the properly applied and cured coating are well below EPA thresholds.

To select an NSF approved product, you must reference the current qualification guidelines. These guidelines include the following factors that must be consistent with the NSF listing for the product:

- Color formula – only certain colors are NSF-approved
- Approved thinner and maximum amount of thinner allowed (if thinning is permitted)
- Total film thickness of the application
- Maximum film thickness per coat
- Number of coats
- Recoat intervals
- Final curing time and temperature
- Minimum size of tank, pipeline, valve, or fitting for each system

It is also critical that tanks and pipes be adequately ventilated during the entire cure-for-service period. Failure to maintain proper curing temperatures and ventilation can result in solvent entrapment within the coating film. This not only can lead to premature failure of the coating system, but can also cause a unacceptably high level of organics in the water. For tanks, this is to include forced ventilation as per the AWWA D 102 standards. Although Ameron cannot design a ventilation system for each application, the following factors should be included in a good ventilation setup:

- Solvent vapors are heavier than air and should be exhausted from the lower areas of the tank with fresh air being supplied from the upper areas of the tank
- Supply air should be 50% relative humidity or lower. If the relative humidity is higher than this, longer curing times may be required. Call Ameron technical service for determining alternate curing schedules. Dehumidification equipment can be used to lower the relative humidity of the supply air.
- All ventilation equipment should be rated for hazardous location Class 1 Division 1 Group D environments.
- All available openings should be used for ventilation of the tank.
- The underground piping should be sealed during application and final cure to prevent solvent vapors from condensing in the piping.
- The ventilation equipment should not be turned off during the entire cure-before-service period.
- Non-combustion heaters (rated for hazardous locations) should be used as needed to ensure the proper curing temperature is maintained. If the curing temperatures are lower than the required temperature, additional curing time will be required. Contact Ameron technical service for advice on additional curing times.
- Care should be taken to ensure there are no “dead zone” with little to no air movement.

These steps are not intended to address issues related to the flammability of the work area. For proper sizing of the ventilation equipment to reduce airborne solvent levels below the lower explosive limit (LEL), a certified safety and health professional should be consulted. Ameron advises the work area should be treated as if it were within the explosive limits during and immediately following coating application.

Finally, prior to being put into service, tanks should be disinfected as per AWWA Standard C 652. This should be followed by filling the tank and sampling the water for taste, odor, and organic contaminants as per EPA Method 524.2. For additional information, call Ameron technical service at 1-800-926-3766.

