

Plumbing system components for manufactured homes and recreational vehicles

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American National Standard

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ANSI/NSF STANDARD 24
FOR
PLUMBING SYSTEM COMPONENTS
FOR
MANUFACTURED HOMES AND RECREATIONAL VEHICLES

SECTION 1. GENERAL

- 1.0 SCOPE: This standard covers pipe, fittings, valves, traps, vents, tanks, pumps, connectors, fixtures, appliances, and similar appurtenances used in a plumbing system of a manufactured home and/or recreational vehicle.
- 1.1 MINIMUM REQUIREMENTS: These requirements are minimum; variations may be permitted when they make components more resistant to corrosion, wear, and physical damage, or if they improve general operation and performance of the device. Variations shall be accepted prior to use. Units with components or materials covered under other NSF standards or criteria, shall comply with those applicable requirements.
- 1.2 ALTERNATE MATERIALS: When specific materials are mentioned, other materials equally satisfactory may be used. Alternate materials shall be accepted prior to use.
- 1.3 STANDARD REVIEW: This standard will be reviewed at least every five years to keep requirements consistent with new technology. The review will be conducted by representatives from the industry, public health, and user groups of the NSF Joint Committee on Plumbing System Components for Manufactured Homes and Recreational Vehicles.

SECTION 2. DEFINITIONS

- 2.0 ACCESSIBLE: Fabricated to be exposed for cleaning and inspection using simple tools (screwdriver, pliers, open-end wrench, etc.).
 - 2.0.1 READILY ACCESSIBLE: Fabricated to be exposed for cleaning and inspection without using tools.
- 2.1 BACKFLOW: The flow of water or other liquids, mixtures, or substances into the distribution pipes of a potable water supply from any sources other than its intended source.
- 2.2 BURST PROTECTION: Prevention of physical damage to the potable water system by antifreeze at specified protection temperature and concentration of active ingredient.
- 2.3 CORROSION-RESISTANT MATERIALS: Materials that maintain their original surface characteristics under prolonged contact with the use environment and chemical compounds.
- 2.4 DRAINAGE SYSTEM: Piping that conveys sewage or other liquid wastes to the drain outlet, excluding the sewer connector.
- 2.5 FIXTURE DRAIN: The drain from the trap of a fixture to the junction with another drain.

- 2.6 FLOOD LEVEL: The overflow level of a receptacle.
- 2.7 FLUSH WATER HOLDING TANK: A tank designed to be manually filled with water that is not intended to be plumbed into a potable water distribution system.
- 2.8 GREYWASTE: Liquid waste materials, exclusive of urine, feces, or industrial waste, deposited in plumbing fixtures found in residences, commercial buildings, industrial plants, and institutions.
- 2.9 MANUFACTURED HOME: Factory-assembled structure equipped with service connections, readily movable as a unit on its running gear and used as a dwelling unit without a permanent foundation.
- 2.10 MULTIPLE FIXTURE PUMP: A pump to deliver water to two or more fixtures. Pumps may be manually or automatically activated.
- 2.11 RECREATIONAL VEHICLE: A vehicular unit designed for recreational, camping, or travel use with its own motive power, or mounted on or towed by another vehicle (travel trailer, camping trailer, truck camper, motor home, etc.).
- 2.12 REMOVABLE: Capable of being taken away from the main unit using only simple tools (screwdriver, pliers, open-end wrench, etc.).
- 2.12.1 READILY REMOVABLE: Capable of being taken away from the main unit without using tools.
- 2.13 SELF-CONTAINED, RECIRCULATING, CHEMICALLY CONTROLLED TOILETS: Toilets with a pump to force flushing liquid (with required chemical) from the self-contained tank through a mechanical, self-cleaning filter into the peripheral rim of the bowl, to flush deposited contaminants back into the tank.
- 2.14 SINGLE FIXTURE PUMP: A pump to deliver water to a single fixture other than a toilet. Pumps may be manually or automatically activated.
- 2.15 TOXIC: Having an adverse physiological effect on humans.
- 2.16 TRAP: A vented fitting or device providing a liquid seal to prevent emission of sewer gases and not materially affecting the flow.

SECTION 3. MATERIALS

- 3.0 GENERAL: Materials shall withstand exposure to the use environment, pressure requirements, corrosive actions of chemicals and water, handling, and installation.
- 3.1 DISSIMILAR MATERIALS: Dissimilar materials may be used, but shall be protected against electrolytic action.
- 3.2 WELDING: Welded seams and deposited weld materials shall meet the applicable corrosion-resistant requirements.

- 3.3 POTABLE WATER CONTACT SURFACES: Surfaces of components intended for potable water shall be nontoxic and not impart an undesirable color, odor, or taste to potable water.
- 3.4 NONCORROSION-RESISTANT MATERIALS: Noncorrosion-resistant materials shall have all wetted surfaces covered with a protective coating. Cathodic protection may also be used to prevent or reduce corrosion.
- 3.5 POTABLE WATER COMPONENTS: Potable water components shall comply with the requirements in Table I.
- 3.5.1 FORMULATION INFORMATION: Formulation information for plastics materials used in potable water shall be submitted and include but not be limited to the following:
- ! Chemical description, purity, and relevant chemistry of the ingredient
 - ! Toxicology of the ingredient, that may include a literature review
 - ! Regulatory status of ingredient

Additional extraction or toxicity testing may be required.