

APPENDIX A

Containment Vessels

This appendix is for information only and is not a part of AWWA B703.

All tanks and containers must be manufactured from or lined with materials that are highly resistant to fluorosilicic acid. General materials in use include the following:

1. Fiberglass coated with resistant resin.
2. Polyethylene manufactured from high-density, cross-linked material that contains a minimum of 0.25 percent ultraviolet stabilizer.
3. Steel tanks lined with a minimum 2.4-mm (³/₃₂-in.) thickness of natural rubber, butyl rubber, or neoprene and secured to the metal surface with proper adhesive.

References to specific materials commonly in use include, but are not limited to, the following: polyvinyl chloride (PVC), type 1, grade 1; polyvinylidene fluoride (PVDF); ethylene propylene dienemomer (EPDM); ethylene chlorotrifluoroethylene (E-CTFE); Saran; Vinyl; Hypalon; Carpenter 20; and Hastelloy C.

When purchasing storage tanks or other appurtenances used to handle fluorosilicic acid, the purchaser may request certification from the materials manufacturer verifying the tested resistance of the particular material for use in contact with fluorosilicic acid. Bulk storage tanks should be provided with a certification plate containing (at minimum) the following:

1. Name of tank manufacturer.
2. Date of manufacture.
3. Chemical (chemicals) to be stored.
4. Mechanical properties of the structure.*
5. Mechanical properties of the lining.†

*For example, high-density, cross-linked polyethylene.

†For example, 2.4-mm (³/₃₂-in.) thick butyl rubber.