Summary of Substantive Changes
between the 2015 and the 2019 editions of
ASTM F2618 "Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems"

Presented to the IAPMO Standards Review Committee on September 9, 2019

General: The changes to this standard should not have an impact on currently listed products. The substantive changes are:

- Removing the requirement of elevated temperatures at the chemical resistance test and moved the procedure to an informational Appendix for CPVC Compound Chemical Resistance at Elevated Temperature (see Table 4, and Appendix X3)

Table 4, Chemical List: Removed the requirement of elevated temperatures at the chemical resistance test as follows:

Table 4 Chemical List

Chemical Environment	72°F (23°C)	~~180°F (82°C)~~
Acetic Acid	100% by volume	~~50% by volume~~
Acetone	30% by volume	~~20% by volume~~
Methyl Alcohol	100% by volume	~~50% by volume~~
Ammonium Hydroxide	15% NH3 by weight	~~Do Not Test~~
Nitric Acid	70% by weight	~~30% by weight~~
Sodium Hydroxide	60% by weight	~~30% by weight~~
Sulfuric Acid	98% by weight	~~85% by weight~~
Hydrochloric Acid	36% by weight	~~36% by weight~~
Hydrogen Peroxide	50% by weight	~~50% by weight~~
Sodium Hypochlorite	15% by weight	~~A~~

~~A: Sodium Hypochlorite is unstable at elevated temperatures.~~

Appendix X3, CPVC Compound Chemical Resistance at Elevated Temperature: Moved the elevated temperature chemical resistance test to make a new non mandatory appendix as follows:

X3. CPVC COMPOUND CHEMICAL RESISTANCE AT ELEVATED TEMPERATURE

X3.1 CPVC Compound Chemical Resistance—Pipe and fitting materials may be evaluated in accordance with Test Method D543 Practice A, procedures I and II, using the chemicals listed in Table X3.1 except that after exposure at elevated temperature, samples should be allowed to reach room temperature before performing the weight and apparent tensile tests. Weight change may not exceed 2% nor may apparent tensile strength change by more than 10 %. In cases where there is a change in the apparent tensile strength greater than 10 %, a further evaluation may be made after the test specimen is removed from the chemical and conditioned for 72 h. If after 72 h, there is a minimum of 50% recovery of tensile strength as compared to the unexposed specimen, and that figure is within 610% of the original tensile strength of the unexposed specimen, the test may be considered acceptable.

NOTE X3.1—The operator of this test must be aware of serious safety concerns when performing chemical resistance at elevated temperature due to the nature of the chemicals such as the various acids, sodium hydroxide and acetone. Adequate personnel protective equipment must be worn at all time. Also it is recommended that the whole test be performed inside a hood.

Table X3.1 Chemical List

Chemical Environment	*180°F (82°C)*
Acetic Acid	*50% by volume*
Acetone	*20% by volume*
Methyl Alcohol	*50% by volume*
Nitric Acid	*30% by weight*
Sodium Hydroxide	*30% by weight*
Sulfuric Acid	*85% by weight*
Hydrochloric Acid	*36% by weight*
Hydrogen Peroxide	*50% by weight*