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INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

IAPMO GUIDE CRITERIA FOR

SOLVENT CEMENT FOR CHLORINATED POLY (VINYL CHLORIDE) (CPVC) PIPE AND FITTINGS FOR LIMITED CHEMICAL WASTE DRAINAGE SYSTEMS

IGC 221 – 2005

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for chlorinated poly (vinyl chloride) (CPVC) solvent cements to be used in joining chlorinated poly (vinyl chloride) pipe, tubing, and socket-type fittings used in limited chemical waste systems complying with IAPMO IGC 210. Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users; to promote understanding regarding materials, manufacture and installation.
- 1.2** The provisions of this standard are not intended to prevent the use of any alternate material or method of construction provided any such alternate meets the intent and requirements of this document and changes are amended to this standard.

2. SCOPE

- 2.1** This standard serves to complement the provisions of the Uniform Plumbing Code, Section 811.0 for chemical wastes.
- 2.2** CPVC solvent cements are used with CPVC 41 chlorinated poly (vinyl chloride) pipe, tubing, and fittings, which meet Class 23447 as defined in Specification D 1784.
- 2.3** The following safety hazards caveat pertains only to the test methods specified in this standard. This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

3. REFERENCED STANDARDS

- 3.1** All standards referenced herein shall be the current edition of that standard.

ASTM D 1084	Viscosity of Adhesives
ASTM D 1598	Time-to-Failure of Plastic Pipe under Constant Internal Pressure

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ASTM D 1599	Short-Time Hydraulic Failure Pressure of Plastic Pipe, Tubing, and Fittings
ASTM D 1784	Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
ASTM D 1600	Terminology for Abbreviated Terms Relating to Plastics
ASTM D 2846	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
ASTM F 412	Terminology Relating to Plastic Piping Systems
ASTM F 439	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Fittings Schedule 80
ASTM F 441	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Fittings Schedules 40 and 80
ASTM F 493	Solvent Cements for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
IAPMO IGC 210	Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Limited Chemical Waste Drainage Systems

4. DEFINITIONS

- 4.1** Definitions used in this standard shall be in accordance with the definitions given in ASTM F 412 and abbreviations shall be in accordance with ASTM D 1600, unless otherwise indicated.
- 4.2** CW – Abbreviations for Chemical Waste.
- 4.3** Limited Chemical Waste – Those chemical waste reagents which are clearly recommended as being suitable for use with the material according to the manufacturer's printed chemical resistance information.
- 4.4** Corrosive Waste – Industrial, chemical, or process liquids that limit the useful service life of the piping system due to chemical or mechanical corrosion.

5. GENERAL REQUIREMENTS

- 5.1** The solvent cement shall be a solution of the base CPVC resin used to make Class 23447, chlorinated poly (vinyl chloride) molding or extrusion compound as defined in ASTM D 1784.
- 5.2** When rework material is used, the manufacturer shall use only his own clean rework material that is compatible with virgin material and produces a solvent cement that shall meet the requirements of this specification.
- 5.3** The cement shall be free-flowing and shall not contain lumps, undissolved resin, or any foreign matter that will adversely affect the ultimate joint strength or chemical resistance of the cement.
- 5.4** The cement shall show no gelation or stratification that cannot be removed by stirring.

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