

Internal Use Only

INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

IAPMO GUIDE CRITERIA FOR

ABS or PVC PIPING SYSTEMS INTENDED FOR LIMITED CHEMICAL WASTE DRAINAGE SYSTEMS

IGC 205 – 2005

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for thermoplastic_ABS or PVC piping systems intended for limited chemical waste drainage systems. 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; and to provide for identifying fittings for installation on tubing complying with this standard.
- 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 of and requirements of this document and changes are amended to this standard.

2. SCOPE

- 2.1** This standard serves to supplement the provisions of the Uniform Plumbing Code, Section 811.0 for chemical wastes.
- 2.2** This standard covers minimum standards for materials in the construction of chemical waste piping systems, and to prescribe minimum test requirements for the performance of fittings and pipe joints, together with methods of marking and identification.
- 2.3** This standard does not address the performance requirements for the installation of materials in fire rated areas.

3. REFERENCED STANDARDS

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

ASTM D 543	Resistance of Plastics to Chemical Reagents
ASTM D 1693	Environmental Stress-Cracking of Ethylene Plastics
ASTM D 1785	Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120

Copyright © 2005 by International Association of Plumbing and Mechanical Officials. All rights reserved. Printed in the United States of America. No part of this publication may be reproduced, stored in an electronic retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

Internal Use Only

ASTM D 2235	Solvent Cements for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings
ASTM D 2564	Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
ASTM D 2661	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste and Vent Pipe and Fittings
ASTM D 2665	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
ASTM F 1412	Polyolefin Pipe and Fittings for Corrosive Waste Drainage Systems
ASTM F 1673	Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems

4. DEFINITIONS

- 4.1** Limited Chemical Waste – Those chemical waste regents, including cleaning solutions, which are clearly recommended as being suitable for use with the material, without special or additional actions taken by the user (e.g. flushing with water) to render the material suitable for use, according to the manufacturer's printed chemical resistance information and chemicals listed within Table 4 of this standard based on their concentrations.

5. GENERAL REQUIREMENTS

- 5.1** Piping and fittings shall comply with applicable ASTM standard listed below:
a) ABS: Complying with ASTM D 2661
b) PVC: Complying with ASTM D 1785 or D 2665
- 5.2** Piping and fittings for use in acid waste, corrosive waste, and special waste systems, shall in addition comply with the testing requirements of this standard.
- 5.3** Solvent Cements shall comply with the requirements of:
a) ASTM D 2564 for PVC
b) ASTM D 2235 for ABS

6. TESTING REQUIREMENTS

- 6.1** All samples shall be conditioned in accordance with Sections 8.1 (Conditioning) and 8.2 (Test Conditions) in ASTM F 1412 or F 1673.
- 6.2 Chemical Resistance Test**
- 6.2.1** Piping and fittings shall be tested in accordance with ASTM D 543, Procedures I and II, using the chemicals in Table 1. At least three specimens shall be used for each material

Copyright © 2005 by International Association of Plumbing and Mechanical Officials. All rights reserved. Printed in the United States of America. No part of this publication may be reproduced, stored in an electronic retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.