Approval of an IAPMO Industry Standard requires verification by the Standards Review Committee that the standard has been developed in accordance with the policies and procedures for standards development (S-001, Standards Development Process, S-008, Appeals and S-011, Operation of the IAPMO Standards Review Committee). Although IAPMO administers the process and establishes rules to promote fairness in achieving consensus, it does not independently test, evaluate, or verify the content of standards.

Consensus is established when substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

The use of IAPMO Industry Standards is completely voluntary; their existence does not in any respect preclude anyone, whether they have approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.

The Standards Review Committee has final authority on interpretation of any IAPMO Industry Standard. Moreover, no person save IAPMO designated staff shall have the right or authority to issue an interpretation of an IAPMO Industry Standard in the name of IAPMO. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

CAUTION NOTICE: This IAPMO Industry Standard may be revised or withdrawn at any time. The policies and procedures require that action be taken periodically to reaffirm, revise, or withdraw this standard. Interested stakeholders of IAPMO Industry Standards may receive current information on all standards by signing up to receive updates and notices at the IAPMO Standards website www.IAPMOstandards.org.

Published by
International Association of Plumbing and Mechanical Officials (IAPMO)
4755 East Philadelphia Street, Ontario, California, 91761, USA
1-800-854-2766 • 1-909-472-4100

Visit the IAPMO Online Store at: www.IAPMOstore.org
Visit the IAPMO Standards website at: www.IAPMOstandards.org

Copyright © 2008-2020 by International Association of Plumbing and Mechanical Officials (IAPMO)
All rights reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior written permission of the publisher.

Printed in the United States of America
Contents

Preface

IAPMO Standards Review Committee

1 Scope
   1.1 Scope
   1.2 Alternative Materials
   1.3 Terminology
   1.4 Units of Measurement

2 Reference Publications

3 Definitions and Abbreviations

4 General Requirements
   4.1 Sizing and Design
   4.2 Wall Thickness
   4.3 Materials
   4.4 Quality of Work and Finish
   4.5 Drawings and Supporting Documentation
   4.6 Volumes, Capacities, Rates, and Dimensions

5 Testing Requirements
   5.1 Strength Tests
   5.2 Chamber Divider and Partition Tests
   5.3 Watertightness Test
   5.4 Stress Crack Resistance Test

6 Markings and Instructions
Preface

This is the first edition of IAPMO IGC YYY, Compression Molded Corrugated Thermoplastic Tanks.

This Standard was developed by the IAPMO Standards Review Committee (SRC) in accordance with the policies and procedures regulating IAPMO industry standards development, Policy S-001, Standards Development Process. This Standard was approved as an IAPMO Industry Standard on __________, 2020.

Notes:
(1) The use of the singular does not exclude the plural (and vice versa) when the sense allows.
(2) The use of IAPMO Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.
(3) This standard was developed using an open process and in accordance with IAPMO Standards Policy S-001, Standards Development Process, which is available on the IAPMO Standards website (www.IAPMOstandards.org).
(4) During its development, this Standard was made available for public review, thus providing an opportunity for additional input from stakeholders from industry, academia, regulatory agencies, and the public at large. Upon closing of public review, all comments received were duly considered and resolved by the IAPMO Standards Review Committee.
(5) This Standard was developed in accordance with the principles of consensus, which is defined as substantial agreement; consensus implies much more than a simple majority, but not necessarily unanimity. It is consistent with this definition that a member of the IAPMO Standards Review Committee might not be in full agreement with all sections of this Standard.
(6) Although the intended primary application of this Standard is stated in its scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.
(7) IAPMO Standards are subject to periodic review and suggestions for their improvement will be referred to the IAPMO Standards Review Committee. To submit a proposal for change to this Standard, you may send the following information to the International Association of Plumbing and Mechanical Officials, Attention Standards Department, at standards@IAPMOstandards.org or, alternatively, at 4755 East Philadelphia Street, Ontario, California, 91761, and include “Proposal for change” in the subject line:
(a) standard designation (number);
(b) relevant section, table, or figure number, as applicable;
(c) wording of the proposed change, tracking the changes between the original and the proposed wording; and
(d) rationale for the change.
(8) Requests for interpretation should be clear and unambiguous. To submit a request for interpretation of this Standard, you may send the following information to the International Association of Plumbing and Mechanical Officials, Attention Standards Department, at standards@IAPMOstandards.org or, alternatively, at 4755 East Philadelphia Street, Ontario, California, 91761, and include “Request for interpretation” in the subject line:
(a) the edition of the standard for which the interpretation is being requested;
(b) the definition of the problem, making reference to the specific section and, when appropriate, an illustrative sketch explaining the question;
(c) an explanation of circumstances surrounding the actual field conditions; and
(d) the request for interpretation phrased in such a way that a “yes” or “no” answer will address the issue.
(9) IAPMO does not “approve”, “rate”, or endorse any item, construction, proprietary device, or activity.
(10) IAPMO does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this Standard and does not undertake to insure anyone utilizing this Standard against...
liability for infringement of any applicable patents, nor assumes any such liability. Users of this Standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their responsibility.

(11) Participation by federal or state agency representative(s) or person(s) affiliated with industry is not to be interpreted as government or industry endorsement of this Standard.

(12) Proposals for amendments to this Standard will be processed in accordance with the standards-writing procedures of IAPMO industry standards development, Policy S-001, Standards Development Process.
# IAPMO Standards Review Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Details</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Collings</td>
<td>Building Services &amp; Licensing - Retired</td>
<td>Salt Lake City, Utah, USA</td>
</tr>
<tr>
<td>M. Durfee</td>
<td>Chief Building Official - Retired</td>
<td>Saratoga Springs, Utah, USA</td>
</tr>
<tr>
<td>M. Antonacci</td>
<td>Plumbing and HVAC Inspector, City of Toronto</td>
<td>Toronto, Ontario, CAN</td>
</tr>
<tr>
<td>R. Coffman</td>
<td>Mechanical Inspector, City of Cedar Falls - Retired</td>
<td>Cedar Falls, Iowa, USA</td>
</tr>
<tr>
<td>C. Crimmins</td>
<td>MN State Pipe Trades - Retired</td>
<td>Champlin, Minnesota, USA</td>
</tr>
<tr>
<td>J. Krahenbuhl</td>
<td>Plumbing and Mechanical Plans Check Specialist, Clark County - Retired</td>
<td>Las Vegas, Nevada, USA</td>
</tr>
<tr>
<td>B. Olinger</td>
<td>William Myers &amp; Sons Inc. - Semi-Retired</td>
<td>East Hanover, New Jersey, USA</td>
</tr>
<tr>
<td>S. Peters</td>
<td>Plumbing &amp; Mechanical Plans Examiner</td>
<td>Santa Monica, California, USA</td>
</tr>
<tr>
<td>B. Pfeiffer</td>
<td>Plumbing Inspector Development Services, City of Topeka - Retired</td>
<td>Topeka, Kansas, USA</td>
</tr>
<tr>
<td>R. Rice</td>
<td>Sr. Mechanical Inspector - Retired</td>
<td>Maplewood, Minnesota, USA</td>
</tr>
<tr>
<td>G. Snider</td>
<td>Plumbing Section Supervisor, City of Surrey</td>
<td>Surrey, British Columbia, CAN</td>
</tr>
<tr>
<td>K. Thompson</td>
<td>IAPMO</td>
<td>Ontario, California, USA</td>
</tr>
<tr>
<td>G. Istefan</td>
<td>IAPMO</td>
<td>Ontario, California, USA</td>
</tr>
<tr>
<td>H. Aguilar</td>
<td>IAPMO</td>
<td>Ontario, California, USA</td>
</tr>
</tbody>
</table>

Chair
Vice-Chair

Staff Liaison

Secretary
1 Scope

1.1 Scope
This Standard covers compression molded corrugated thermoplastic septic tank, sewage holding tank, and effluent chamber applications specified under CSA B66 and specifies requirements for sizing, design, materials, physical characteristics, performance testing, markings and literature.

Note: This Standard supplements requirements for corrugated thermoplastic prefabricated septic tanks, sewage holding tanks, and effluent chambers specified under CSA B66. This standard is not intended to address corrugated thermoplastic prefabricated septic tanks, sewage holding tanks, and effluent chambers manufactured using molding techniques other than compression molding.

1.2 Alternative Materials
The requirements of this Standard are not intended to prevent the use of alternative materials or methods of construction, provided such alternatives meet the intent and requirements of this Standard.

1.3 Terminology
In this Standard,
(a) “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy to comply with the Standard;
(b) “should” is used to express a recommendation, but not a requirement;
(c) “may” is used to express an option or something permissible within the scope of the Standard; and
(d) “can” is used to express a possibility or a capability.

Notes accompanying sections of the Standard do not specify requirements or alternative requirements; their purpose is to separate explanatory or informative material from the text. Notes to tables and figures are considered part of the table or figure and can be written as requirements.

1.4 Units of Measurement
SI units are the primary units of record in global commerce. In this Standard, the inch/pound units are shown in parentheses. The values stated in each measurement system are equivalent in application, but each unit system is to be used independently. All references to gallons are to U.S. gallons.
2 Referenced Publications
This Standard refers to the following publications, and where such reference is made, it shall be to the current edition of those publications, including all amendments published thereto.

ASTM International
ASTM D638
Standard Test Method for Tensile Properties of Plastics

ASTM D790
Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

CSA Group
CSA B66
Design, material, and manufacturing requirements for prefabricated septic tanks and sewage holding tanks

3 Definitions and Abbreviations
This Section is reserved for later use.

4 General Requirements

4.1 Sizing and Design
Compression molded septic tanks, sewage holding tanks, and effluent chambers shall conform with the general requirements described in CSA B66, Section 4, General Requirements.

4.2 Wall Thickness
Compression molded septic tanks, sewage holding tanks, and effluent chambers shall have a:
(a) combined average wall thickness of the side walls, tops, bottoms, covers, and inlet and outlet ends as specified in Table 1; and
(b) minimum wall thickness of the side walls, tops, bottoms, covers, and inlet and outlet ends as specified in Table 1.

4.3 Materials
Compression molded septic tank, sewage holding tank, and effluent chamber
(a) materials shall be thermoplastic compounds that comply with the properties specified in Table 1; and
(b) resins may be combined with copolymers, pigments, unidirectional tape, woven fabric, glass fibers, and impact modifiers which together are suitable for manufacture.

4.4 Quality of Work and Finish
The surface of interior and exterior walls shall be in accordance with the applicable requirements of CSA B66.
4.5 **Drawings and Supporting Documentation**
Drawings and supporting documentation shall show materials, dimensions, capacities, and other information necessary to demonstrate compliance with this Standard. Supporting documentation shall be signed by a licensed professional engineer.

4.6 **Volumes, Capacities, Rates, and Dimensions**
Volumes, capacities, rates, and dimensions shall be determined in accordance with the applicable requirements of CSA B66.

5 **Testing Requirements**

5.1 **Strength Tests**
Strength testing shall be in accordance with the performance requirements specified in CSA B66, Section 9.2.2, Concrete, fibreglass-reinforced polyester, and thermoplastic tanks.

5.2 **Chamber Divider and Partition Tests**
Chamber divider and partition testing shall be in accordance with the performance requirements specified in CSA B66, Section 9.3, Chamber Divider and Partition Tests.

5.3 **Watertightness Test**
Watertightness testing shall be in accordance with the performance requirements specified in CSA B66, Section 9.4, Watertightness Test.

5.4 **Stress Crack Resistance Test**
The stress crack resistance test shall be in accordance with the performance requirements specified in CSA B66, Section 9.6, Environmental Stress Crack Resistance Test.

6 **Markings and Instructions**
In addition to the markings and instructions specified in CSA B66, compression molded corrugated thermoplastic tanks complying with this Standard shall be marked in accordance with their intended application.
**Table 1**
Wall Thickness and Thermoplastic Properties for Compression Molded Tanks
(See Section 4.2, 4.3)

<table>
<thead>
<tr>
<th>Combined Average Wall Thickness, mm (in)</th>
<th>Minimum Wall Thickness, mm (in)</th>
<th>Tensile Strength per ASTM D638, MPa (psi)</th>
<th>Flexural Modulus of Elasticity per ASTM D790, MPa (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 (0.12)</td>
<td>1.5 (0.06)</td>
<td>31 (4,500)</td>
<td>3,100 (450,000)</td>
</tr>
<tr>
<td>5.0 (0.20)</td>
<td>2.5 (0.10)</td>
<td>16.5 (2,400)</td>
<td>862 (125,000)</td>
</tr>
</tbody>
</table>