

SINGAPORE STANDARD

**Specification for suitability of non-metallic
products for use in contact with water
intended for human consumption with
regard to their effect on the quality of the
water**

– Part 3: High temperature tests

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Secretary	: Ms Lim Lee Fang	<i>Singapore Productivity and Standards Board</i>
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Foreword

This Singapore Standard was prepared by the Technical Committee on Rubber, Rubber Products, Plastics and other Polymer under the direction of the Chemical Standards Committee.

This part of SS 375 supersedes SS 375 : Part 8 : 1994. SS 375 : Part 3 : 2001 is an adoption of BS 6920-3 : 2000 and is implemented with the permission of British Standards Publishing Ltd.

SS 375 is published in several parts, namely Part 1 – Specification, Part 2 – Methods of test and Part 3 – High temperature tests.

Part 2 is further divided into a number of parts as follows:

Part 2:1	Methods of test – Samples for testing;
Part 2:2:1	Methods of test – Odour and flavour of water – General method of test;
Part 2:2:2	Methods of test – Odour and flavour of water – Method of testing odours and flavours imparted to water by hoses and composite pipes and tubes;
Part 2:2:3	Methods of test – Odour and flavour of water – Method of testing odours and flavours imparted to water by hoses for conveying water for food and drink preparation;
Part 2:3	Methods of test – Appearance of water;
Part 2:4	Methods of test – Growth of aquatic microorganisms test;
Part 2:5	Methods of test – The extraction of substances that may be concern to public health;
Part 2:6	Methods of test – The extraction of metals.

Annex A is informative.

NOTE

- 1. Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions.*
- 2. An SS or TR is voluntary in nature except when it is made mandatory by a regulatory authority. It can also be cited in contracts making its application a business necessity. Users are advised to assess and determine whether the SS or TR is suitable for their intended use or purpose. If required, they should refer to the relevant professionals or experts for advice on the use of the document. Enterprise Singapore shall not be liable for any damages whether directly or indirectly suffered by anyone or any organisation as a result of the use of any SS or TR.*
- 3. Compliance with a SS or TR does not exempt users from any legal obligations.*

Introduction

Non-metallic products used in contact with hot and boiling water can leach water soluble compounds not detectable in significant quantities when tested under the conditions of test described in SS 375 : Part 2. Such products, if satisfactory in the tests described in Part 2, can be tested by the methods described in this part of SS 375 if they are intended for use in hot domestic water installations where the water in contact with the product will pass to a draw-off point and hence could be used for drinking or culinary purposes. Materials use in plastics kettles can also be assessed for suitability for drinking purposes using these tests.

NOTE – It is recommended that no boiling water tests are undertaken on non-metallic products until these products have been shown to comply with the complete requirements of SS 375, including an Odour and Flavour assessment undertaken at 85°C.

Specification for suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 3 : High temperature tests

1 Scope

This part of SS 375 describes methods designed to assess the ability of a non-metallic product to affect hot and boiling water intended for human consumption by imparting a discernible odour or flavour, or any noticeable colour or turbidity. It is also applicable in assessing the leachability in hot or boiling water of metals from non-metallic products and the extraction from such products of substances that may be of concern to public health. It is not applicable to the test for growth of aquatic microorganisms (see SS 375 : Part 2:4). Products used exclusively in industrial or steam services are excluded.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of SS 375. For dated references, subsequent amendments to or revisions of any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

- a) SS 375 : Part 1 : 2001, Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 1 : Specification.
- b) SS 375 : Part 2:2:1, Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2:2:1 : Methods of test – Odour and flavour of water – General method of test.
- c) SS 375 : Part 2:2:2, Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2:2:2 : Methods of test – Odour and flavour of water – Method of testing odour and flavours imparted to water by hoses.
- d) SS 375 : Part 2:2:3, Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2:2:3 : Methods of test – Odour and flavour of water – Method of testing odour and flavours imparted to water by hoses for conveying water for food and drink preparation.
- e) SS 375 : Part 2:3, Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2:3 : Methods of test – Appearance of water.
- f) SS 375 : Part 2:4, Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2:4 : Methods of test – Growth of aquatic microorganisms.

- g) SS 375 : Part 2:5, Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2:5 : Methods of test – The extraction of substances that may be of concern to public health.
- h) SS 375 : Part 2:6, Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2:6 : Methods of test – The extraction of metals.