

## 1. SEERIA VEOKONTEINERID

Andmed ja katsetamine

Osa 2: Termokonteinerid

**Series 1 freight containers**

**Specification and testing**

**Part 2: Thermal containers**

**(ISO 1496-2:2008)**

EVS

**EESTI STANDARDI EESSÖNA****NATIONAL FOREWORD**

See Eesti standard EVS-ISO 1496-2:2012 „1. seeria veokonteinerid. Andmed ja katsetamine. Osa 2: Termokonteinerid“ sisaldb rahvusvahelise standardi ISO 1496-2:2008 „Series 1 freight containers – Specification and testing - Part 2: Thermal containers“ identset ingliskeelset teksti.

Ettepaneku rahvusvahelise standardi ümbertrüki meetodil ülevõtuks on esitanud EVS/TK 16, standardi avaldamist on korraldanud Eesti Standardikeskus

Standard EVS-ISO 1496-2:2012 on jõustunud sellekohase teate avaldamisega EVS Teataja 2012. aasta veebruarikuu numbris.

Standard on kätesaadav Eesti Standardikeskusest.

This Estonian Standard EVS-ISO 1496-2:2012 consists of the identical English text of the International Standard ISO 1496-2:2008 „Series 1 freight containers – Specification and testing – Part 2: Thermal containers“.

Proposal to adopt the International Standard by reprint method has been presented by EVS/TK 16, the Estonian standard has been published by the Estonian Centre for Standardisation.

This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.

The standard is available from the Estonian Centre for Standardisation.

**Käsitlusala**

Standardi ISO 1496 see osa esitab põhilised andmed ja katsetamisnõuded rahvusvahelises vahetus-kaubanduses ning kaupade veol raud- ja maanteel ning merel kasutatavate ISO 1. seeria termokonteineritele, sh neile, mida kasutatakse vahelduvalt eri transpordiviisidega.

**MÄRKUS** Standardi selle osa kasutusmugavuse nimel on lisas N mõõtühikute SI-süsteemis esitatud väärusteteisendused mitte SI-süsteemi mõõtühikutele.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 55.180.10

**Standardite reproduutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele**

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:  
Aru 10, 10317 Tallinn, Eesti; [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto:info@evs.ee)

**The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation**

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:  
Aru 10, 10317 Tallinn, Estonia; [www.evs.ee](http://www.evs.ee); phone 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

## Contents

Page

<b>Foreword.....</b>	<b>iv</b>
<b>Introduction .....</b>	<b>v</b>
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>1</b>
<b>4 Classification.....</b>	<b>3</b>
<b>5 Marking .....</b>	<b>3</b>
<b>6 Dimensions and ratings .....</b>	<b>3</b>
<b>7 Design requirements .....</b>	<b>5</b>
<b>8 Testing .....</b>	<b>9</b>
<b>9 Electrical aspects of thermal containers.....</b>	<b>24</b>
<b>Annex A (normative) Diagrammatic representation of capabilities appropriate to all types and sizes of thermal containers, except where otherwise stated.....</b>	<b>27</b>
<b>Annex B (normative) Details of requirements for load-transfer areas in base structures of containers .....</b>	<b>33</b>
<b>Annex C (normative) Dimensions of fork-lift pockets (where provided).....</b>	<b>40</b>
<b>Annex D (normative) Dimensions of gooseneck tunnels (where provided) .....</b>	<b>42</b>
<b>Annex E (normative) Cooling water connections .....</b>	<b>43</b>
<b>Annex F (normative) Air inlets and outlets.....</b>	<b>46</b>
<b>Annex G (normative) Mounting of clip-on units.....</b>	<b>51</b>
<b>Annex H (normative) Air temperature measurement points.....</b>	<b>54</b>
<b>Annex I (normative) Steady-state conditions for heat leakage test (Test No. 14) .....</b>	<b>56</b>
<b>Annex J (normative) Phase connections to container plugs and sockets .....</b>	<b>57</b>
<b>Annex K (normative) Electric plug and socket, four-pin, 380/440 V, 50/60 Hz, 32 A .....</b>	<b>58</b>
<b>Annex L (normative) Electrical power supplies for thermal containers (9.2) .....</b>	<b>62</b>
<b>Annex M (normative) General requirements for 220 volt and dual voltage equipment .....</b>	<b>63</b>
<b>Annex N (informative) Conversion of SI units to non-SI units.....</b>	<b>64</b>
<b>Bibliography .....</b>	<b>65</b>

EVS

## Introduction

The following grouping of container types is used for specification purposes in ISO 1496:

### Part 1

General purpose	00 to 09
Specific purpose	
closed, vented/ventilated	10 to 19
open top	50 to 59

### Part 2

Thermal	30 to 49
---------	----------

### Part 3

Tank	70 to 79
Bulk, pressurized	85 to 89

### Part 4

Bulk, non-pressurized (box type)	20 to 24
Bulk, non-pressurized (hopper type)	80 to 84

### Part 5

Platform (container)	60
Platform-based, with incomplete superstructure and fixed ends	61 and 62
Platform-based, with incomplete superstructure and folding ends	63 and 64
Platform-based, with complete superstructure	65 to 69

NOTE Container groupings for parts 1 and 3 to 5 inclusive are described in detail in the relevant parts of ISO 1496.

# Series 1 freight containers — Specification and testing —

## Part 2: Thermal containers

### 1 Scope

This part of ISO 1496 gives the basic specifications and testing requirements for ISO series 1 thermal containers for international exchange and for conveyance of goods by road, rail and sea, including interchange between these forms of transport.

NOTE For the convenience of users of this part of ISO 1496, the conversion of values expressed in SI units to values expressed in non-SI units is given in Annex N.

### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 668:1995, *Series 1 freight containers — Classification, dimensions and ratings*

ISO 830:1981, *Freight containers — Vocabulary*

ISO 1161:1984, *Series 1 freight containers — Corner fittings — Specification*

ISO 6346:1995, *Freight containers — Coding, identification and marking*

ISO 10368:2006, *Freight thermal containers — Remote condition monitoring*

IEC 60947-1, *Low-voltage switchgear and controlgear — Part 1: General rules*

### 3 Terms and definitions

For the purposes of this document, the general terms and definitions given in ISO 830 and the following apply.

#### 3.1

##### **thermal container**

freight container having insulating walls, doors, floor and roof designed to retard the rate of heat transmission between the inside and the outside of the container

#### 3.2

##### **insulated container**

thermal container having no devices for cooling and/or heating, either permanently installed or attached