

# ISO 1496-4:2023-10 (E)

## Series 1 freight containers - Specification and testing - Part 4: Non-pressurized containers for dry bulk

---

<b>Contents</b>		<b>Page</b>
<b>Foreword</b>		<b>v</b>
<b>Introduction</b>		<b>vi</b>
<b>1</b>	<b>Scope</b>	<b>1</b>
<b>2</b>	<b>Normative references</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions</b>	<b>1</b>
<b>4</b>	<b>Dimensions and ratings</b>	<b>4</b>
4.1	External dimensions	4
4.2	Internal dimensions	4
4.3	Ratings	4
<b>5</b>	<b>Design requirements</b>	<b>5</b>
5.1	General	5
5.2	Corner fittings	5
5.3	Base structure	6
5.4	Floor strength of bulk containers	7
5.5	End structure	8
5.6	Side structure	8
5.7	Walls (box type only)	8
5.8	Shell (hopper type only)	8
5.9	Openings	9
5.9.1	General	9
5.9.2	Door opening(s) (box type 1 only)	9
5.9.3	Opening(s) for loading	9
5.9.4	Opening(s) for discharging	10
5.9.5	Inspection and maintenance openings (hopper type only)	10
5.10	Construction	10
5.11	Requirements — Optional features	10
5.11.1	Fork-lift pockets	10
5.11.2	Gooseneck tunnels	11
5.11.3	Walkways	11
5.11.4	Ladders	11
5.11.5	Interface for external fumigation equipment	11
5.11.6	Sanitation (where required)	11
<b>6</b>	<b>Testing</b>	<b>11</b>
6.1	General	11
6.2	Test no. 13 — Strength of end wall with fitted discharge hatch	13
6.2.1	General	13
6.2.2	Procedure	13
6.2.3	Requirements	13
6.3	Test no. 14 — Bottom hatch operation test	14
6.3.1	General	14
6.3.2	Procedure (see Figure A.14)	14
6.3.3	Requirements	14
6.4	Test no. 15 — Floor test - Box type 2 with roof or end wall cargo loading openings	14
6.4.1	General	14
6.4.2	Procedure (see Figure A.15)	14
6.4.3	Requirements	14
6.5	Test no. 16 — Internal longitudinal restraint (hopper type only)	15

6.5.1	General	15
6.5.2	Procedure [see Figure A.16 a) and A.16 b)]	15
6.5.3	Requirements	15
6.6	Test no. 17 — Internal lateral restraint (hopper type only)	15
6.6.1	General	15
6.6.2	Procedure [see Figure A.17 a) and A.17 b)]	15
6.6.3	Requirements	16
6.7	Test no. 18 — Walkways (where provided)	16
6.7.1	General	16
6.7.2	Procedure (see Figure A.18)	16
6.7.3	Requirements	16
6.8	Test no. 19 — Ladders (where provided)	16
6.8.1	General	16
6.8.2	Procedure (see Figure A.19)	16
6.8.3	Requirements	16
6.9	Test no. 20 — Airtightness test types B1/BB according to ISO 6346	17
6.9.1	General	17
6.9.2	Procedure	17
6.9.3	Requirements	17
<b>Annex A (informative) Diagrammatic representation of capabilities appropriate to specific types and sizes of dry bulk non-pressurised containers, except where otherwise stated</b>		<b>18</b>
<b>Annex B (informative) Typical examples of the location of openings for loading of dry bulk non-pressurized box-type containers</b>		<b>20</b>
<b>Bibliography</b>		<b>22</b>