

ISO 3874:2017-10 (E)

Series 1 freight containers - Handling and securing

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Basic requirements	5
4.1	General	5
4.2	Packing and emptying	5
4.3	Stowage and securing of cargo	6
5	Handling	6
5.1	Handling by specified lifting methods (see Clause 6)	6
5.2	Handling by unspecified lifting methods	6
6	Specified lifting methods	6
6.1	General	6
6.2	Top lift spreaders	9
6.3	Top lift sling	12
6.4	Bottom lift sling	14
6.5	Side lift: Method 1	17
6.6	Side lift: Method 2	19
6.7	Side lift: Method 3	22
6.8	End lift: Method 1	24
6.9	End lift: Method 2	26
6.10	Fork lifts	28
7	Landing and supporting	30
8	Stacking on the ground	30
9	Securing during transport	31
9.1	General	31
9.2	Securing on board a ship	32
9.2.1	Forces on board a ship	32
9.2.2	Effects on container	32
9.2.3	Ship design, stowage and securing of containers	34
9.2.4	Types of securing equipment	35
9.3	Securing of container for road and rail transport	39
9.3.1	General	39
9.3.2	Terminal trailer operation	40
9.3.3	Public road operation	40
9.3.4	Rail vehicle operation	43
9.3.5	Double stack rail car operations	43
Annex A (normative)	Twistlocks for securing of containers -- Function, dimensions, strength requirements and testing	45
Annex B (normative)	Stacking fittings for securing of containers -- Function, dimensions, strength requirements and testing	59

Annex C (normative) Lashing rod systems, including tensioning devices, for securing of containers -- Function, dimensions, strength requirements and testing	66
Annex D (informative) Container securing fittings	71
Annex E (normative) Strength requirements of container securing fittings	76
Annex F (informative) Guide on the choice of sizes for, and the positioning of, twistlock tie-down devices for securing series 1 freight containers to carrying vehicles	79
Bibliography	92