



**NSAI**  
Standards

Irish Standard  
I.S. EN 15878:2010

# Steel static storage systems - Terms and definitions

## I.S. EN 15878:2010

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

### The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<i>This document replaces:</i>	<i>This document is based on:</i> EN 15878:2010	<i>Published:</i> 21 July, 2010
This document was published under the authority of the NSAI and comes into effect on: 5 August, 2010		ICS number: 01.040.53 53.080
<b>NSAI</b> 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	<b>Sales:</b> T +353 1 857 6730 F +353 1 857 6729 W standards.ie
Údarás um Chaighdeáin Náisiúnta na hÉireann		

ICS 01.040.53; 53.080

English Version

## Steel static storage systems - Terms and definitions

Système de stockage statiques en acier - Termes et  
définitions

Ortsfeste Regale aus Stahl - Begriffe

This European Standard was approved by CEN on 19 June 2010.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

	Page
Foreword.....	3
Introduction.....	4
<b>1 Scope .....</b>	<b>5</b>
<b>2 Normative references .....</b>	<b>5</b>
<b>3 Terms and definitions .....</b>	<b>5</b>
<b>3.1 Storage system .....</b>	<b>5</b>
<b>3.2 General definitions for any type of storage system.....</b>	<b>6</b>
<b>3.3 Components .....</b>	<b>9</b>
<b>4 Abbreviations .....</b>	<b>16</b>
<b>5 Storage Systems: Types, specific definitions and components .....</b>	<b>16</b>
<b>5.1 Palletized Goods .....</b>	<b>16</b>
<b>5.1.1 Adjustable pallet racking – APR .....</b>	<b>16</b>
<b>5.1.2 Drive-in and drive-through pallet racking .....</b>	<b>20</b>
<b>5.1.3 S/R machine pallet racking .....</b>	<b>23</b>
<b>5.1.4 Open face pallet racking .....</b>	<b>25</b>
<b>5.2 Small Parts – Mechanically Handled.....</b>	<b>27</b>
<b>5.2.1 Open face miniload racking.....</b>	<b>27</b>
<b>5.2.2 Multi-location miniload racking.....</b>	<b>30</b>
<b>5.3 Small Parts – Hand Loaded .....</b>	<b>33</b>
<b>5.3.1 Shelving.....</b>	<b>33</b>
<b>5.3.2 Multi-tier shelving .....</b>	<b>38</b>
<b>5.3.3 Cantilever shelving system – Gondola.....</b>	<b>40</b>
<b>5.4 Long Unit Loads.....</b>	<b>43</b>
<b>5.4.1 Cantilever racking.....</b>	<b>43</b>
<b>5.4.2 Cassette racking .....</b>	<b>45</b>
<b>5.5 Dynamic Storage – Palletized Goods .....</b>	<b>48</b>
<b>5.5.1 Mobile racking.....</b>	<b>48</b>
<b>5.5.2 Pallet live storage .....</b>	<b>50</b>
<b>5.5.3 Shuttle racking system .....</b>	<b>53</b>
<b>5.6 Dynamic Storage – Small Parts.....</b>	<b>56</b>
<b>5.6.1 Mobile shelving.....</b>	<b>56</b>
<b>5.6.2 Carton live storage .....</b>	<b>58</b>
<b>5.6.3 Carousels.....</b>	<b>60</b>
<b>5.6.4 Storage lifts .....</b>	<b>62</b>
<b>5.7 Various.....</b>	<b>63</b>
<b>5.7.1 Mezzanine floor.....</b>	<b>63</b>
<b>5.7.2 Raised floor .....</b>	<b>66</b>
<b>5.7.3 Rack-clad storage system .....</b>	<b>67</b>
<b>Annex A (informative) Mechanical handling equipment .....</b>	<b>70</b>
<b>Annex B (informative) Load make up accessories .....</b>	<b>76</b>
<b>B.1 Pallets .....</b>	<b>76</b>
<b>B.1.1 General.....</b>	<b>76</b>
<b>B.1.2 Definitions .....</b>	<b>76</b>
<b>B.1.3 Types.....</b>	<b>76</b>
<b>B.2 Containers .....</b>	<b>82</b>
<b>B.2.1 General.....</b>	<b>82</b>
<b>B.2.2 Main types of containers for manual handling.....</b>	<b>82</b>
<b>B.2.3 Main types of containers for use with MHE .....</b>	<b>84</b>
<b>Bibliography.....</b>	<b>88</b>

## **Foreword**

This document (EN 15878:2010) has been prepared by Technical Committee CEN/TC 344 “Steel static storage systems”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2011, and conflicting national standards shall be withdrawn at the latest by January 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## **Introduction**

This European Standard has been developed in order to rationalize the position which has been built up over the years resulting in a multiplicity of terms used by manufacturers and users, varying geographically and even across organizations.

This standard will clarify this position and result in a positive identification of the various items of storage equipment.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-