

SS EN 124-3:2021
EN 124-3:2015, IDT
(ICS 93.080.30)

SINGAPORE STANDARD

Gully tops and manhole tops for vehicular and pedestrian areas

– Part 3: Gully tops and manhole tops made of steel or aluminium alloys

The national standard is the identical implementation of EN 124-3:2015 and is adopted with permission of CEN, Rue de la Science 23 B - 1040 Brussels

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National Foreword

This Singapore Standard was prepared by the Working Group on Manhole Tops and Surface-box Tops set up by the Technical Committee on Civil and Geotechnical Works under the purview of the Building and Construction Standards Committee.

This standard is an identical adoption of EN 124-3:2015, “Gully tops and manhole tops for vehicular and pedestrian areas – Part 3: Gully tops and manhole tops made of steel or aluminium alloys”, including the amendments to this edition, published by European Committee for Standardization, CEN, Rue de la Science 23 B - 1040 Brussels.

SS EN 124, under the general title “Gully tops and manhole tops for vehicular and pedestrian areas”, comprises three parts:

- Part 1: Definitions, classifications, general principles of design, performance requirements and test methods (identical adoption of EN 124-1:2015);
- Part 2: Gully tops and manhole tops made of cast iron (identical adoption of EN 124-2:2015); and
- Part 3: Gully tops and manhole tops made of steel or aluminium alloys (identical adoption of EN 124-3:2015).

As the materials specified in EN 124 Parts 4, 5 and 6 are not commonly used in Singapore, users may refer directly to EN 124-4, EN 124-5 and EN 124-6.

In Singapore, the common practices are as follows:

- Where required, covers and frames are designed against mosquito breeding;
- Concrete with a minimum compressive strength class of C25/30 according to SS EN 206 - Concrete – Specification, performance, production and conformity, at least suitable for use in “cyclic wet and dry” conditions, is used for cover fillings;
- Freeze-thaw resistance is not applicable as there is no snow in Singapore;
- Annex ZA (informative) is not relevant to Singapore.

NOTE 1 – Where appropriate, the words “European Standard” are read as “Singapore Standard”.

NOTE 2 – Reference to International/Overseas Standards are replaced by applicable Singapore Standards or Technical References.

NOTE 3 – Where numerical values are expressed as decimals, the comma is read as a full point.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

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. Where SSs are deemed to be stable, i.e. no foreseeable changes in them, they will be classified as "Mature Standards". Mature Standards will not be subject to further review, unless there are requests to review such standards.*
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 and the Singapore Standards Council 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. Although care has been taken to draft this standard, users are also advised to ensure that they apply the information after due diligence.*
3. *Compliance with a SS or TR does not exempt users from any legal obligations.*

EUROPEAN STANDARD

EN 124-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2015

ICS 93.080.30

Supersedes EN 124:1994

English Version

Gully tops and manhole tops for vehicular and pedestrian areas - Part 3: Gully tops and manhole tops made of steel or aluminium alloys

Dispositifs de couronnement et de fermeture pour les zones
de circulation utilisées par les piétons et les véhicules -
Partie 3: Dispositifs de couronnement et de fermeture en
acier ou alliage d'aluminium

Aufsätze und Abdeckungen für Verkehrsflächen - Teil 3:
Aufsätze und Abdeckungen aus Stahl oder
Aluminiumlegierungen

This European Standard was approved by CEN on 12 March 2015.

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-CENELEC 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-CENELEC 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 124-3:2015) has been prepared by Technical Committee CEN/TC 165 "Wastewater engineering", the secretariat of which is held by DIN.

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 December 2015 and conflicting national standards shall be withdrawn at the latest by March 2017.

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.

Together with EN 124-1:2015, EN 124-2:2015, EN 124-4:2015, EN 124-5:2015 and EN 124-6:2015, this document will supersede EN 124:1994.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the Regulation (EU) No. 305/2011.

For relationship with EU Regulation(s), see informative Annex ZA, which is an integral part of this document.

EN 124, *Gully tops and manhole tops for vehicular and pedestrian areas*, consists of the following parts:

- *Part 1: Definitions, classification, general principles of design, performance requirements and test methods;*
- *Part 2: Gully tops and manhole tops made of cast iron;*
- *Part 3: Gully tops and manhole tops made of steel or aluminium alloys;*
- *Part 4: Gully tops and manhole tops made of steel reinforced concrete;*
- *Part 5: Gully tops and manhole tops made of composite materials;*
- *Part 6: Gully tops and manhole tops made of polypropylene (PP), polyethylene (PE) or unplasticized poly(vinyl chloride) (PVC-U).*

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard is applicable to gully tops and manhole tops made of mild steel, stainless steel and aluminium alloys whether in combination with concrete or not, with a clear opening up to and including 1 000 mm for covering gullies, manholes and inspection chambers for installation in areas subjected to pedestrian and/or vehicular traffic.

It is applicable to manhole tops and gully tops for use in

- areas which can only be used by pedestrians and pedal cyclists (at least class A 15),
- pedestrian areas and comparable areas, car parks or car parking decks (at least class B 125),
- the area of kerbside channels of roads which, when measured from the kerb edge, extends a maximum of 0,5 m into the carriageway and a maximum of 0,2 m into the pedestrian area (at least class C 250),
- carriageways of roads (including pedestrian streets), hard shoulders and parking areas, for all types of road vehicles (at least class D 400),
- areas imposing high wheel loads, e.g. docks, aircraft pavements (at least class E 600),
- areas imposing particularly high wheel loads, e.g. aircraft pavements (class F 900).

This European Standard is not applicable in isolation but only in combination with EN 124-1 and gives guidance for combinations of covers/gratings made of steel or aluminium alloys with frames according to EN 124-2 and EN 124-4, EN 124-5 or EN 124-6.

Fabrication of manhole tops and gully tops in accordance with this standard is limited to cold forming, mechanical crimping or welding together component parts made of metal plate, strip or bar or rolled or extruded metal sections.

This European Standard is not applicable to:

- manhole tops and gully tops made of aluminium tread plates for use in carriageways of roads (class D 400) and areas imposing high wheel loads (Classes E 600 and F 900);
- concave gratings for class D 400 installed in carriageways of roads or hard shoulders and concave gratings for classes F 900 and E 600;
- gratings/covers as part of prefabricated drainage channels according to EN 1433;
- floor and roof gullies in buildings which are specified in EN 1253 (all parts); and
- surface boxes.

2 Normative references

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

EN 124-1:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 1: Definitions, classification, general principles of design, performance requirements and test methods*

EN 124-2:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 2: Gully tops and manhole tops made of cast iron*

EN 124-3:2015 (E)

EN 124-4:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 4: Gully tops and manhole tops made of steel reinforced concrete*

EN 124-5:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 5: Gully tops and manhole tops made of composite materials*

EN 124-6:2015, *Gully tops and manhole tops for vehicular and pedestrian areas — Part 6: Gully tops and manhole tops made of polypropylene (PP), polyethylene (PE) or unplasticized poly(vinyl chloride) (PVC-U)*

EN 206:2013, *Concrete — Specification, performance, production and conformity*

EN 573-3, *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Part 3: Chemical composition and form of products*

EN 1386, *Aluminium and aluminium alloys — Tread plate — Specifications*

EN 1676:2010, *Aluminium and aluminium alloys — Alloyed ingots for remelting — Specifications*

EN 1706, *Aluminium and aluminium alloys — Castings — Chemical composition and mechanical properties*

EN 10025-1, *Hot rolled products of structural steels — Part 1: General technical delivery conditions*

EN 10088-1:2014, *Stainless steels — Part 1: List of stainless steels*

EN 10130, *Cold rolled low carbon steel flat products for cold forming — Technical delivery conditions*

EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles — Specifications and test methods (ISO 1461)*

EN ISO 3452-1, *Non-destructive testing - Penetrant testing — Part 1: General principles (ISO 3452-1)*

EN ISO 9606-1, *Qualification testing of welders — Fusion welding — Part 1: Steels (ISO 9606-1)*

EN ISO 9606-2, *Qualification test of welders — Fusion welding — Part 2: Aluminium and aluminium alloys (ISO 9606-2)*

EN ISO 14554 (all parts), *Quality requirements for welding — Resistance welding of metallic materials (ISO 14554)*

EN ISO 14732, *Welding personnel — Qualification testing of welding operators and weld setters for mechanized and automatic welding of metallic materials (ISO 14732)*

EN ISO 15609 (all parts), *Specification and qualification of welding procedures for metallic materials — Welding procedure specification (ISO 15609)*