

SS 597 : 2020
(ICS 23.020.10; 23.020.30)

SINGAPORE STANDARD

**Code of practice for bulk liquid oxygen storage
installations on user premises**

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Air Products Singapore Industrial Gases Pte Ltd

Iwatani Corporation (Singapore) Pte Ltd

Leeden National Oxygen Limited

Linde Gas Singapore Pte Ltd

Ministry of Manpower

Singapore Civil Defence Force

Singapore Institute of Architects

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Foreword

This Singapore Standard was prepared by the Working Group on Review of SS 597 set up by the Technical Committee on Chemicals and Processes under the purview of CSC.

This is a revision of SS 597 : 2014 “Code of practice for bulk liquid oxygen storage installations on user premises”. This revision provides an additional requirement for outdoor installation with an illustration to provide further guidance to gas suppliers and users. The content has also been restructured for a better flow of information and readability.

Table 1 of this standard was reproduced from NFPA 55, “Compressed gases and cryogenic fluids code, 2020 edition. Copyright© 2019, National Fire Protection Association. For a full copy of NFPA 55, please go to www.nfpa.org.

Acknowledgement is made for the use of information from the above publication.

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.*

Code of practice for bulk liquid oxygen storage installations on user premises

1 Scope

1.1 This Singapore Standard covers the general principles recommended for bulk liquid oxygen storage installations on user premises where the tank capacity is more than 450 L and less than 100,000 L.

1.2 It also specifies more extensive safety precautions where extreme hazards are involved, as in highly congested areas or where associated equipment has only a small safety margin. The relevant authority may specify these additional safety requirements. Where there is any doubt, the advice of the authority and the oxygen supplier may be sought.

1.3 This standard focuses on static tanks and does not cover portable tanks which are not permanently located or stationed at site.

2 Normative references

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

ASME B31.3	Process piping
ASME BPVC	Boiler and pressure vessel code
CGA G-4.1	Cleaning of equipment for oxygen service
SS 555 series	Protection against lightning
SS 531 : Part 2	Code of practice for lighting of work places – Part 2: Outdoors
SS 586 series	Specification for hazard communication for hazardous chemicals and dangerous goods