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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 11984-2024

**Technical specification for chlorine safety of chemical
industrial enterprises**

化工企业氯气安全技术规范

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document replaces GB 11984-2008 "Safety Regulations for Chlorine Gas". Compared with GB 11984-2008, except for structural adjustments and editorial changes, In addition, the main technical changes are as follows:

- Changed the scope of application (see Chapter 1, Chapter 1 of the.2008 edition);
- Increased the requirements for the number of personnel in hazardous areas (see 4.2.2,

4.2.3);

- Added requirements for handling abnormal conditions (see 4.2.4);
- Added the requirements for temperature limits when using carbon steel chlorine pipelines (see 4.2.5);
- Added the requirement to evacuate liquid chlorine cylinders before filling (see 4.2.9);
- Added verification methods (see 4.4, 5.5,
- Changed the requirements for nitrogen trichloride discharge facilities (see 5.1.1, 4.6 of the 2008 edition);
- Added requirements for accident chlorine absorption devices for electrolysis devices (see 5.2.3);
- Added the requirements for group voltage over-limit alarm interlock (see 5.2.5);
- Added requirements for controlling the temperature of wet chlorine gas (see 5.3.5);
- Added the requirement that liquid chlorine gasification should adopt full gasification process (see 5.4.1);

1 Scope

China's mandatory technical specification for chlorine safety in chemical enterprises. Chlorine is produced and used in enormous quantity - it is the starting point of PVC, of solvents and of water treatment - and it is a war gas: heavier than air, so a release flows along the ground and fills basements and pits rather than dispersing, and destructive to the lungs at concentrations far below what it takes to smell it. Almost every industrial chlorine fatality has been someone downwind or downhill of a leak rather than at it. The specification covers the plant that holds and moves it: the tanks and cylinders and their inspection, the piping and valve materials, since chlorine is inert when dry and violently corrosive when wet, the absorption system that must take a release, the detection and alarm, and the emergency response. It applies to the storage, transfer and use of chlorine in chemical enterprises.

This document specifies the safety requirements for chlorine production, storage and emergency disposal for chemical companies that produce and use chlorine. This document applies to chemical companies that produce and use chlorine.

Note. Chlorine gas referred to in this document includes liquid chlorine.

2 Normative references

The contents of the following documents constitute essential clauses of this document

through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB 2894 Safety signs and their use guidelines

GB 15258 Provisions for the preparation of chemical safety labels

GB/T 16483 Contents and item sequence of chemical safety data sheets

GB/T 17519 Guidelines for the preparation of safety data sheets for chemicals

GB/T 29639 Guidelines for the preparation of emergency plans for production safety accidents in production and operation units

GB/T 30000.31 Chemical Classification and Labelling Specification Part

31.Warning Signs for Chemical Workplaces

GB 30077 Requirements for emergency rescue supplies for hazardous chemical units

GB/T 34525 Safety regulations for the handling, loading and unloading, storage and use of gas cylinders

GB 36894 Risk benchmark for hazardous chemical production plants and storage facilities

GB/T 37243 Method for determining external safety protection distances for hazardous chemical production equipment and storage facilities

GB 39800.2 Specification for personal protective equipment Part

3 Terms, definitions and abbreviations

3.1 Terms and Definitions There are no terms or definitions that require definition in this document.

3.2 Abbreviations The following abbreviations apply to this document. ORP.
Oxidation-Reduction Potential