ICS 13.3
CCS A80

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 18218-2018

Identification of major hazard installations for hazardous chemicals

危险化学品重大危险源辨识

Issued on: November 19, 2018 **Implemented on: March 1, 2019**

Issued by: State Administration for Market Regulation;
Standardization Administration of China

Table of Contents

Foreword

All technical content of this Standard is mandatory. This Standard is drafted in accordance with the rules given in GB/T 1.1-2009. This Standard replaces GB 18218-2009 "Identification of major hazard installations for dangerous chemicals". As compared with GB 18218-2009, the main technical changes are as follows: - MAKE clear in the scope of application that off-plant transportation is not covered by identification scope [SEE Clause 1 d); Clause 1

d) of 2009 edition]; - MODIFY the definitions of hazardous chemicals and major hazard installations for hazardous chemicals (SEE 3.1, 3.4; 3.1,

3.4 of 2009 edition); - ADD the definition of mixture (SEE 3.7); - MODIFY the classification of major hazard installations, which are classified into major hazard installations in production unit and major hazard installations in storage unit (SEE 4.1.1;

4.1.1 of 2009 edition); - MODIFY the name of hazardous chemicals (SEE Table 1; Table 1 of 2009 edition); - MODIFY the classification method for hazardous chemicals (SEE 4.1.2;

4.1.2 of 2009 edition); - ADD the method for determining the actual quantity of hazardous chemicals present (SEE 4.2.2); - ADD identification requirements for mixtures (SEE 4.2.3); - ADD grading method for major hazard installations (SEE 4.3). This Standard was proposed by and shall be under the jurisdiction of Ministry of Emergency Management of the PRC. Drafting organizations of this Standard. China Academy of Safety Science and Technology, SINOPEC Qingdao Safety Engineering Institute. Main drafters of this Standard. Wei Lijun, Wang Rujun, Du Yingquan, Shi Lichen, Zhang Shengzhu, Yu Lijian, Luo Aimin, Yang Chunsheng, Song Zhanbing, Yang Guoliang, Li Yuncai, Zhao Wenfang, Wang Jiajian. The previous editions of the standard replaced by this Standard were released as follows: - GB 18218-2000, GB 18218-2009. Identification of major hazard installations for hazardous chemicals

1 Scope

GB 18218-2018 is the Chinese national standard on identification of major hazard installations for hazardous chemicals, in the field of environment and health protection, safety. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 19 November 2018 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2019. Classification: ICS 13.3, CCS A80. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This Standard specifies the basis and method for identifying major hazard installations for hazardous chemicals. This Standard applies to production and business organizations which produce, store, use, and operate hazardous chemicals. This Standard does not apply to.

a) Nuclear facilities, factories which process radioactive substances, except for the sectors which process non-radioactive substances in these facilities and factories;

b) Military installations;

c) Mining industry, except for processing technology and storage activities involving hazardous chemicals;

d) Off-plant transportation of hazardous chemicals (including railways, roads, waterways, aviation, pipelines, and other modes of transportation);

e) Offshore oil and natural gas exploration activities.

2 Normative references

The following documents are indispensable for the application of this document. For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB 30000.2 Rules for classification and labelling of chemicals - Part 2. Explosives

GB 30000.3 Rules for classification and labelling of chemicals - Part 3. Flammable gases

GB 30000.4 Rules for classification and labelling of chemicals - Part 4. Aerosols

GB 30000.5 Rules for classification and labelling of chemicals - Part 5. Oxidizing gases

GB 30000.7 Rules for classification and labelling of chemicals - Part 7. Flammable liquids

GB 30000.8 Rules for classification and labelling of chemicals - Part 8. Flammable solids

GB 30000.9 Rules for classification and labelling of chemicals - Part

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Hazardous chemicals Highly toxic chemicals and other chemicals which are hazardous to the human body, facilities, and the environment with properties such as toxicity, corrosion, explosion, combustion, combustion-supporting.

3.2 Unit Production and storage devices, facilities, or sites involving hazardous chemicals, which are divided into production unit and storage unit.

3.5 Production unit Devices and facilities for the production, processing, and use, etc. of hazardous chemicals. When there is a shut-off valve between the device and the facility, USE the shut-off valve as separation boundary to divide into independent units.

3.6 Storage unit A relatively separate area of storage tanks or warehouses used to store hazardous chemicals. The area of storage tanks, using the fire dike of the tank area as the boundary, is divided into independent units. The warehouse, using independent storehouse (independent building) as the boundary, is divided into independent units.

4.1 Identification basis

4.1.1 Hazardous chemicals shall, based on their hazard characteristics and their quantities, be identified for major hazard installations. SEE Table 1 and Table 2 for details. The pure substances and mixtures of hazardous chemicals shall be classified in accordance with the provisions of GB 30000.2, GB 30000.3,

4.1.2 The method for determining the threshold quantity of hazardous chemicals is as follows:

4.2 Identification index for major hazard installations

4.2.1 Production units and storage units in which the quantity of hazardous chemicals equals or exceeds the threshold quantity specified in Table 1 and Table 2 are considered to be major hazard installations. The quantity of hazardous chemicals present in the unit, according to the number of categories of hazardous chemicals, is divided into the following two cases.

4.2.3 For mixtures of hazardous chemicals, if the mixture is of the same hazard category as its pure substance, the mixture is considered as a pure substance and is calculated as a whole. If the mixture is not of the same hazard category as its pure substance, then according to the new hazard category, its threshold quantity shall be considered.

4.2.4 SEE Appendix A for the identification procedures for major hazard installations for hazardous chemicals.

4.3 Grading of major hazard installations

4.3.3 Grading standard of major hazard installations Based on the calculated R value, according to Table 6, the level of major hazard installations for hazardous chemicals is determined.