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Rule for Storage of Chemical Dangers
常用化学危险品贮存通则

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Rule for Storage of Chemical Dangers

1 Subject Content and Application Scope

This standard specifies the basic requirements for the storage of chemical dangers commonly used (hereinafter referred to as chemical dangers).

This standard is applicable to the out warehouse, entry warehouse, storage and preservation of chemical dangers commonly used (hereinafter referred to as chemical dangers)

2 Normative References

GB 190 Packing Symbol of Dangerous Goods

GB 13690 Classification and Labels of Dangerous Chemical Substances Commonly Used

GB J16 Code of Design on Building Fire Protection and Prevention

3 Definitions

3.1 Segregated storage

The storage mode that different materials are given certain distances and non-incinpatible materials are separated by passageways in the same room or the same area

3.2 Cut-off storage

The storage mode that the materials are separated with incinpatible materials with partition plate or wall in the same building or the same area

3.3 Detached storage

The storage mode that the materials are stored in different buildings or in the external areas away from all the buildings

3.4 Incinpatible materials

Chemical materials of conflicting chemical properties or of different fire extinguishment methods

4 Basic Requirements for the Storage of Chemical Dangers

4.1 Storage of chemical dangers must comply with the national laws, regulations and other relevant requirements.

4.2 Chemical dangers must be stored in the special chemical dangers warehouses approved by the Public Security Department. The chemical dangers stored and their quantities in the self-protected warehouses of Sales Department must be approved by the Public Security Department. Without approval, No one shall set chemical dangers warehouses at random.

4.3 Chemical dangers shall be stacked in the open air, which shall meet such safety requirements as fire prevention and explosion prevention; explosives, Class I flammable substances, substances emitting flammable gases when wet and poisons shall not be stacked in the open air.

4.4 Chemical dangers warehouses must be assigned with professional technical personnel. Personnel shall be specially assigned to manage the warehouses and sites. The administrative personnel must be equipped with reliable personal safety protection articles.

4.5 Chemical dangers are classified into 8 categories according to the requirements of GB 13690:

- a. Explosives;
- b. Compressed gases and liquefied gases;
- c. Flammable liquids;
- d. Flammable solids, substances liable to spontaneous combustion and substances emitting flammable gases when wet;
- e. Oxidizing substances and organic peroxides;
- f. Poisons;
- g. Radioactive substances;
- h. Corrosives.

4.6 Symbols

The chemical dangers stored shall be provided with obvious symbols which shall meet the requirements of GB 190. Two or more chemical dangers of different grades, if stored in the same area, shall be marked as the properties of the chemical dangers of the highest grade.

4.7 Storage mode

Chemical dangers are classified into three kinds of storage modes:

- a. Segregated storage;
- b. Cut-off storage;
- c. Detached storage.

4.8 Chemical dangers shall be stored in different areas and warehouses according to their properties and categories.

Various chemical dangers shall not be stored together with incompatible materials. Storage of incompatible materials are detailed in Appendix A (Informative).

4.9 Smoke and open fire must be strictly forbidden in the buildings and areas where the chemical dangers are stored.

5 Requirements for Storage Sites

5.1 The buildings for storing chemical dangers shall not be arranged with any basement or other underground buildings, whose fire resistance grade, floor number, floor space, safe evacuation and fire separation shall meet the relevant requirements of the nation.

5.2 Storage sites and building structures shall not only meet the relevant requirements of the nation but also reduce the influence to the ambient environment and residents.

5.3 Electric installation at the storage site

5.3.1 Fire-fighting electric equipment in the storage buildings and sites for chemical dangers shall be able to meet the requirements of fire power and meet the relevant requirements of Section 1 of Chapter 10 in GBJ 16.

5.3.2 Transmission and distribution lines, light fixtures, fire accident lighting and evacuation indication signs in the chemical dangers storage areas or buildings shall meet the safety requirements.

5.3.3 The buildings for storing flammable and explosive chemical dangers must be equipped with lightning protection equipment.

5.4 Ventilation or temperature regulation at the storage sites

5.4.1 The buildings for storing chemical dangers must be equipped with ventilation equipment that shall be protected with care.

5.4.2 Ventilation systems in the buildings for storing chemical dangers shall be equipped with earthing devices for guiding static electricity.

5.4.3 Vent pipes shall be made of non-combustible materials.

5.4.4 Vent pipes should not pass through such fire separators as fire wall. Otherwise, vent pipes shall be separated with fire separators with non-combustible materials.

5.4.5 In the buildings for storing chemical dangers, the heating medium temperature shall not be too high, the hot water heating shall not exceed 80°C, and the steam heating and machinery heating shall not be used.

5.4.6 Thermal insulation materials of heating pipes and equipment must be made of non-combustible ones.

6 Storage Arrangement and Storage Capacity Limit

6.1 Storage arrangement of chemical dangers depend on the classification, subitem, container types, storage modes and fire-fighting requirements of chemical dangers.

6.2 Storage capacity and storage arrangement are detailed in Table 1.

Table 1

Storage type	Open-air storage	Segregated storage	Cut-off storage	Detached storage
Storage requirements				

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