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

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GB 18597-2001

# Standard for pollution control on hazardous waste storage

危险废物贮存污染控制标准

[Including Modification List 2013XG1]

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# Standard for pollution control on hazardous waste storage

### 1 Subject content and scope of application

### 1.1 Subject content

This Standard specifies general requirements for hazardous waste storage, the requirements for packaging of hazardous waste, and for site selection, design, operation, safety protection, monitoring, and closure of storage facility.

### 1.2 Scope of application

This Standard applies to the pollution control, supervision and management of all hazardous wastes (except tailings) storage, to the producers, operators, and managers of hazardous waste.

### 2 Reference standards

The provisions contained in the following standards, by reference in this Standard, constitute provisions of this Standard; and have the same effect as this Standard.

GB 16297 Comprehensive emission standard of air pollutants

GB 8978 Integrated Wastewater Discharge Standard

GB 5085.1~3 Identification standards for hazardous wastes

GB 15562.2 Graphical signs for environmental protection - Solid waste storage (disposal) site

GB 14554 Emission Standards for Odor Pollutants

GB/T 15555.1~12 Solid waste - Determination of extraction procedure toxicity

When the above standards are revised, the latest edition shall be used.

groundwater.

- **6.1.3** The site shall be located beyond 800 m away from the residential area and beyond 150 m away from the surface waters.
- **6.1.4** It shall be avoided from being built in areas with karst caves or areas prone to severe natural disasters such as floods, landslides, debris flow, and tidal sand.
- **6.1.5** It shall be built outside the protection area of flammable and explosive hazardous article warehouses and high-voltage transmission lines.
- **6.1.6** It shall be located in the downwind direction of the largest wind frequency all year round in the residential central area.
- **6.1.7** The site selection of waste heap for centralized storage, in addition to meeting the above requirements, shall meet the requirements of clause 6.3.1.
- 6.2 Design principles for hazardous waste storage facility (warehouse type)
- **6.2.1** The ground and hem shall be constructed of solid, impermeable materials, which must be compatible with hazardous waste.
- **6.2.2** There must be a leaking liquid collection device, a gas outlet, and a gas purification device.
- **6.2.3** There shall be safety lighting facility and observation windows in the facility.
- **6.2.4** In places where containers for loading liquid or semi-solid hazardous waste are stored, there must be a corrosion-resistant hardened ground with no fractures on the surface.
- **6.2.5** It shall design hems to intercept leakage. The volume enclosed by the ground and the hem is not less than 1/5 of the maximum reserves or total reserves of the intercepting largest container.
- **6.2.6** Incompatible hazardous waste must be stored separately; and separated with isolation partitions.

### 6.3 Stacking of hazardous waste

**6.3.1** The foundation must be impermeable. The impermeable layer is at least 1 m thick clay layer (Permeability coefficient is  $\leq 10^{-7}$  cm/s), or 2 mm thick high-density polyethylene, or other artificial materials at least 2 mm thick. The permeability coefficient is  $\leq 10^{-10}$  cm/s.

with the intended receipt of hazardous waste; and shall be registered.

- **7.3** It shall not receive hazardous waste which is not affixed with the label meeting the requirements of 4.9 or with a label which is not filled in as prescribed.
- **7.4** The same type of hazardous waste contained in the container can be stacked and stored.
- **7.5** There shall be a handling lane between each stack.
- **7.6** Incompatible wastes shall not be mixed- or combined-stored.
- **7.7** Both hazardous waste producers and operators of hazardous waste storage facilities must record the hazardous waste situation. The record must indicate the name, source, quantity, characteristics of hazardous waste, the type of packaging container, date of storage, storage location, date of exit-warehouse of the waste, and the name of receiving organization.

Hazardous waste records and manifests, after hazardous waste is retrieved, shall be retained for 3 a.

- **7.8** The stored hazardous waste packaging containers and storage facilities must be inspected regularly. If damage is found, measures shall be taken timely to clean up and replace.
- **7.9** Leaking liquid, cleaning liquid, and leachate must meet the requirements of GB 8978 before discharge. After the gas emitted from the gas outlet is treated, it shall meet the requirements of GB 16297 and GB 14554.

# 8 Safety protection and monitoring of hazardous waste storage facility

#### 8.1 Safety protection

- **8.1.1** Hazardous waste storage facilities must, in accordance with the provisions of GB 15562.2, be provided with warning signs.
- **8.1.2** Walls or other protective fences shall be provided around the hazardous waste storage facility.
- **8.1.3** Hazardous waste storage facilities shall be equipped with communication equipment, lighting facilities, safety protective clothing and tools, and emergency protective facilities.

- 7. It may cause the fire alarm.
- 8. It may cause the fire alarm when in contact with combustible materials.
- 9. It is easy to explode when mixed with combustible materials.
- 10. Flammable.
- 11. Highly flammable.
- 12. Extremely flammable.
- 13. Extremely flammable liquefied gas.
- 14. A strong reaction occurs when exposed to water.
- 15. Highly flammable gases are released when exposed to water.
- 16. It is easy to explode when mixed with oxidizing substances.
- 17. It burns automatically in the air.
- 18. When used, flammable/explosive gases and air mixtures may be produced.
- 19. It may produce peroxides which are easy to explode.
- 20. Harmful to the human body after inhalation.
- 21. Harmful to the human body after contact with the skin.
- 22. Harmful to the human body after swallowing.
- 23. It will be poisoned after inhalation.
- 24. It will be poisoned after contact with the skin.
- 25. It will be poisoned after swallowing.
- 26. It will be highly poisoned after inhalation.
- 27. It will be highly poisoned after contact with the skin.
- 28. It will be highly poisoned after swallowing.
- 29. Poison gas is released when exposed to water.
- 30. When used, it can become highly flammable.

- 20/21/22 Harmful to the human body after inhalation, contact with the skin, or swallowing.
- 20/22 Harmful to the human body after inhalation or swallowing.
- 21/22 Harmful to the human body after contact with the skin or swallowing.
- 23/24 It will be poisoned after inhalation or contact with the skin.
- 23/24/25 It will be poisoned after inhalation, contact with the skin, or swallowing.
- 23/25 It will be poisoned after inhalation or swallowing.
- 24/25 It will be poisoned after contact with the skin or swallowing.
- 26/27 It will be highly poisoned after inhalation or contact with the skin.
- 26/27/28 It will be highly poisoned after inhalation, contact with the skin, or swallowing.
- 26/28 It will be highly poisoned after inhalation or swallowing.
- 27/28 It will be highly poisoned after contact with the skin or swallowing.
- 36/37 Irritate eyes and respiratory system.
- 36/37/38 Irritate eyes, respiratory system, and skin.
- 36/38 Irritate eyes and skin.
- 37/38 Irritate respiratory system and skin.
- 42/43 It may cause sensitivity after inhalation or contact with the skin.

#### Safety terms on the label

- 1. It must be locked.
- 2. Keep in a cool place.
- 3. Do not get close to the residence.
- 4. The container must be tightly closed.
- 5. The container must be kept dry.
- 6. The container must be placed in a ventilated place.

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30. It shall wear eye protection and face protection tools.
31. USE (to be specified) to clean the ground and objects contaminated by this substance.
32. When encountering a fire alarm, USE fire extinguishing equipment; do not use
33. Storage temperature does not exceed °C.
34. USE to keep moist.
35. It can only be placed in the original container.
36. Do not mix with
37. It can only be placed in a ventilated place.
Co-use of various safety terms
38. The container must be locked and stored in a cool, ventilated place.
39. Store in a cool, ventilated place; do not put close. (Mutually incompatible substances must be specified).
40. The container must be tightly closed and kept dry.
41. It can only be placed in the original container and placed in a cool, ventilated place. Do not put close. (Non-mutually incompatible substances must be specified).
42. The container must be tightly closed and stored in a ventilated place.
43. Do not eat or drink, or smoke when using.
44. Avoid contacting with the skin and eyes.
45. It shall put on appropriate protective clothing and wear appropriate protective gloves.
46. It shall put on appropriate protective clothing, wear appropriate protective gloves, and wear eye protection and face protection tools.

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