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**Safety code for inspection of hazardous properties for
dangerous goods - General specifications**

危险货物危险特性检验安全规范 通则

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Table of Contents

Foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Categories	6
5 Requirements	8
6 Tests	9
7 Signs	10
8 Inspection rules	10
Appendix A (Normative) Hazard priority list	12
Appendix B (Normative) Sign of hazardous characteristics of dangerous goods	13

Safety code for inspection of hazardous properties for dangerous goods - General specifications

1 Scope

This standard specifies the terms and definitions, classification, requirements, testing, marking, inspection rules of dangerous goods.

This standard is applicable to the inspection of dangerous characteristics of dangerous goods.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB 190 Packing symbol of dangerous goods

GB/T 3690-1992 Classification and sign of commonly used dangerous chemical products

United Nations Recommendations on the Transport of Dangerous Goods - Model Regulations (13th revision)

3 Terms and definitions

The following terms and definitions, which are defined in GB/T 3690 and "Recommendations on the Transport of Dangerous Goods - Model Regulations" (13th revision) apply to this standard.

3.1

Explosive

Solid or liquid substances which, under external action (such as heat, pressure, impact, etc.), can undergo violent chemical reactions, generate a large amount of gas and heat instantaneously, cause the surrounding pressure to rise rapidly and explode,

thereby damaging the surrounding environment items. It also includes items, which have no mass explosion hazard, as well as the items with combustion, projectile, minor explosion hazards.

3.2

Gas

Substances which have a vapor pressure greater than 300 kPa at 50 °C. OR a substance that is completely gaseous at a standard pressure of 101.3 kPa at a temperature including 20 °C. It includes compressed gases, liquefied gases, dissolved gases, refrigerated liquefied gases, gas mixtures, mixtures of one or more gases with vapors of one or more other categories of substances, gas-filled articles and aerosols.

3.3

Flammable liquid

Flammable liquids, liquid mixtures or liquids containing solid substances. It excludes liquids which are included in other categories because of their hazardous properties. Its closed cup test flash point is equal to or lower than 61 °C.

3.4

Flammable solid, spontaneously combustible, contact water emit flammable gases

Flammable solids refer to solids, which have low ignition point, are sensitive to heat, impact, friction, are easy to be ignited by external fire sources and burn rapidly, meanwhile emit toxic smoke or gas. It does not include items listed as explosives.

Spontaneously combustible substances refer to substances, that have a low spontaneous ignition point AND are prone to oxidation reactions in the air, releasing heat and burning by themselves.

Substances that emit flammable gases when in contact with water refer to substances, that are liable to become spontaneously combustible or emit dangerous quantities of flammable gases, when exposed to water.

3.5

Oxidizer, organic peroxide

Oxidizers refer to substances that do not necessarily combust themselves, BUT usually cause or promote the combustion of other substances, by releasing oxygen.

Organic peroxides refer to organic substances, which contain peroxide-groups in

- Item 1.2: Substances and articles which present a projection hazard but not a mass explosion hazard;
- Item 1.3: Substances and articles which have a fire hazard and a local explosion hazard or a local projection hazard or both, BUT which do not have a mass explosion hazard;
- Item 1.4: Substances and articles which do not present a significant hazard;
- Item 1.5: Substances which are very insensitive BUT have mass explosion hazard;
- Item 1.6: Substances which are extremely insensitive BUT have no mass explosion hazard.

4.1.3 Category 2: Gases

- Item 2.1: Flammable gases;
- Item 2.2: Non-flammable non-toxic gas;
- Item 2.3: Toxic gases.

4.1.4 Category 3: Flammable liquids

4.1.5 Category 4: Flammable solids; spontaneously combustible; contact water emit flammable gases

- Item 4.1: Flammable solids, self-reactive substances, desensitized explosives;
- Item 4.2: Substances liable to spontaneous combustion;
- Item 4.3: Substances which, in contact with water, emit flammable gases.

4.1.6 Category 5: Oxidizers and organic peroxides

- Item 5.1: Oxidizers;
- Item 5.2: Organic peroxides.

4.1.7 Category 6: Toxic and infectious substances

- Item 6.1: Toxic substances;
- Item 6.2: Infectious substances.

4.1.8 Category 7: Radioactive substances

4.1.9 Category 8: Corrosive substances

4.1.10 Category 9: Miscellaneous dangerous substances and articles

4.2 Category of dangerous goods packaging

Except for the dangerous goods of category 1, category 2, category 7, items 5.2 and 6.2, the packaging of other types of dangerous goods can be divided into three packing levels, according to the degree of danger, namely:

Packing group I - Highly hazardous substances;

Packing group II - Substances of moderate danger;

Packing group III - Substances of minor danger;

The division of the degree of danger of various dangerous goods can be determined through tests related to hazardous characteristics.

5 Requirements

5.1 Safety requirements

5.1.1 The producer of a new product or the entrusting party applying for the classification of the product shall provide all available safety data about the product, such as toxicity data.

5.1.2 When there is suspicion of explosiveness, a small-scale preliminary test shall be carried out first; then the test of a larger quantity of substances shall be carried out. Preliminary tests include determining the sensitivity of the substance to mechanical stimuli (impact and friction) as well as to heat and flame.

5.1.3 In tests involving the initiation of potentially explosive substances or articles, a safe waiting period shall be maintained after initiation.

5.1.4 Extra care shall be taken in handling the tested samples; the tested samples shall be destroyed, as soon as possible after the test.

5.2 Test requirements

5.2.1 The test of hazardous characteristics shall be carried out, according to the test conditions. If no tolerance is given in the experiments, this means that the accuracy is determined by the number of decimal places for any given dimension, e.g., 1.1 means 1.05 to 1.15. If the conditions during the test deviate from the given conditions, the reason for the deviation shall be stated in the test report.

5.2.2 The composition of the experimental sample shall be consistent with the concentration of the substance to be transported. The content of various active substances and various diluents shall be listed in the test report, which has an accuracy

6.3 For goods, which have multiple hazards BUT are not specifically listed in the Dangerous Goods List in Chapter 3.2 of the United Nations "Recommendations on the Transport of Dangerous Goods - Model Regulations" (13th revision), it means that the strictest packing category of these goods of relevant hazards of the goods has priority over other packing groups, as shown in Appendix A.

7 Signs

7.1 Types of signs

There are 9 categories and 21 types of signs for dangerous characteristics of dangerous goods, see Appendix B.

7.2 Graphics of sign

The shape of the sign is a square (diamond), which has an angle of 45°. The minimum size is generally 100 mm x 100 mm. It consists of four parts: pattern, text description, background color, dangerous goods category number.

7.3 Use of sign

7.3.1 Principles of using the sign

When a dangerous goods has more than one hazard, in addition to using the sign to indicate the main hazard category, the corresponding sign of other important hazard categories shall also be used.

7.3.2 Use method of sign

It is carried out according to the relevant provisions of GB 190.

8 Inspection rules

8.1 Inspection items: Carry out inspection item by item according to the requirements of Chapter 5, Chapter 6, Chapter 7 of this standard.

8.2 Under the following circumstances, the manufacturer shall apply to the relevant inspection department for inspection of hazardous characteristics, before submitting for transportation:

In any of the following situations, inspection of hazardous characteristics shall be carried out:

- When a new product is put into production or an old product is subject to trans-plant production;

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