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

**GB 30000.11-2013**

Replacing GB 20586-2006

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**Rules for classification and labelling of chemicals - Part 11:  
Pyrophoric solids**

化学品分类和标签规范 第11部分：自燃固体

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## Foreword

Clause 4 and Clause 6 of this part are mandatory; the remainder is recommended.

GB 30000 Rules for classification and labelling of chemicals is planned in thirty parts: Part 1 General provisions (replacing GB 13690-2009); Part 2 Explosives (replacing GB 20576-2006); Part 3 Flammable gases (replacing GB 20577-2006); Part 4 Aerosols (replacing GB 20578-2006); Part 5 Oxidizing gases (replacing GB 20579-2006); Part 6 Gases under pressure (replacing GB 20580-2006); Part 7 Flammable liquids (replacing GB 20581-2006); Part 8 Flammable solids (replacing GB 20582-2006); Part 9 Self-reactive substances and mixtures (replacing GB 20583-2006); Part 10 Pyrophoric liquids (replacing GB 20585-2006); Part 11 Pyrophoric solids (replacing GB 20586-2006); Part 12 Self-heating substances and mixtures (replacing GB 20584-2006); Part 13 Substances and

mixtures which in contact with water emit flammable gases (replacing GB 20587-2006); Part 14 Oxidizing liquids (replacing GB 20589-2006); Part 15 Oxidizing solids (replacing GB 20590-2006); Part 16 Organic peroxides (replacing GB 20591-2006); Part 17 Corrosive to metals (replacing GB 20588-2006); Part 18 Acute toxicity (replacing GB 20592-2006); Part 19 Skin corrosion/irritation (replacing GB 20593-2006); Part 20 Serious eye damage/eye irritation (replacing GB 20594-2006); Part 21 Respiratory or skin sensitization (replacing GB 20595-2006); Part 22 Germ cell mutagenicity (replacing GB 20596-2006); Part 23 Carcinogenicity (replacing GB 20597-2006); Part 24 Reproductive toxicity (replacing GB 20598-2006); Part 25 Specific target organ toxicity, single exposure (replacing GB 20599-2006); Part 26 Specific target organ toxicity, repeated exposure (replacing GB 20601-2006); Part 27 Aspiration hazard; Part 28 Hazardous to the aquatic environment (replacing GB 20602-2006); Part 29 Hazardous to the ozone layer; Part 30 Warning signs for workplaces handling chemicals.

This part is Part 11 of GB 30000. It is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB 20586-2006 Safety rules for classification, precautionary labelling and precautionary statements of chemicals - Pyrophoric solids.

The technical content of this part is consistent with the relevant content of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), fourth revised edition.

Compared with GB 20586-2006, the main technical changes are as follows: the title of the standard was changed, the Chinese title becoming Rules for classification and labelling of chemicals - Part 11: Pyrophoric solids and the English title Rules for classification and labelling of chemicals - Part 11: Pyrophoric solids; the content of Clause 1 Scope was modified, replacing precautionary label by label and deleting precautionary statement; the introductory wording of Clause 2 Normative references was modified and the United Nations GHS, fourth revised edition, was added as a cited document; introductory wording was added to Clause 3 Terms and definitions.

Further changes: Figure 1 Decision logic and the guidance formerly in Clause 5 were moved into informative Annex A; the former Clause 7 was deleted and, following the United Nations GHS fourth revised edition, the former Table 3 of Clause 7 was revised and became normative Annex B; following the same edition, the former Clauses 6, 7 and 8 were revised and consolidated into Clause 6, and the former Table 2 was revised and became normative Annex C; the former Clause 8 was deleted and the related hazard statements and precautionary statements became informative Annex D; and informative Annex E, Examples of labels, was added.

This part was proposed by and is under the jurisdiction of the National Technical Committee on Hazardous Chemicals Management of Standardization Administration of China (SAC/TC

251).

The previous edition of the standard replaced by this part was GB 20586-2006.

## 1 Scope

China's national rule for deciding whether a solid chemical must be declared pyrophoric, and for what has to appear on its label if it is. A pyrophoric solid is one that catches fire on its own simply by meeting air, with no spark and no heating - finely divided metals, some metal powders and certain organometallic compounds behave this way - and a drum of such a material opened carelessly at a receiving dock is a fire before anyone has decided what to do about it. The answer the world agreed on is that the hazard travels with the package: the same pictogram, the same signal word and the same hazard statement, whatever country the drum was filled in. This part of GB 30000 is China's adoption of that agreement for one hazard class. It carries the terms and definitions, the classification criteria, the decision logic and guidance, and the label requirements for pyrophoric solids, and it applies whenever such a solid is classified and labelled under the United Nations Globally Harmonized System. Clauses 4 and 6 are mandatory, the rest of the part is recommended. It replaced GB 20586-2006 and is aligned with the fourth revised edition of the GHS; it is used by chemical manufacturers, importers, packers and by anyone who has to write a safety data sheet or print a drum label for the Chinese market.

This part of GB 30000 specifies the terms and definitions, the classification criteria, the decision logic and guidance, and the labelling for pyrophoric solids.

This part applies to the classification and labelling of pyrophoric solids according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (hereinafter referred to as GHS).

## 2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB 6944-2012 Classification and code of dangerous goods.

GB 13690 General rule for classification and hazard communication of chemicals.

United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), fourth revised edition.

United Nations Recommendations on the Transport of Dangerous Goods - Manual of Tests and Criteria, fifth revised edition.

United Nations Recommendations on the Transport of Dangerous Goods - Model

Regulations, seventeenth revised edition.

### 3 Terms and definitions

The terms and definitions given in GB 13690 and the following apply to this document.

3.1 pyrophoric solids: a solid which, even in small quantities, ignites within five minutes after coming into contact with air.

### 4 Classification criteria

4.1 The general principles for the classification and labelling of pyrophoric solids are given in GB 13690.

4.2 Pyrophoric solids are classified by test N.2 described in 33.3.1.4 of Part III of the United Nations Recommendations on the Transport of Dangerous Goods - Manual of Tests and Criteria, fifth revised edition (hereinafter referred to as the Manual of Tests and Criteria); see Table 1.

Table 1 sets out the single hazard category recognized for pyrophoric solids and the criterion attached to it, which restates the definition given in 3.1.

A footnote to Table 1 governs the physical form to be used in the classification test: the test shall use the substance or mixture in the form in which it is supplied, and where the physical form of the same chemical differs from that used previously and this difference is considered likely to alter its performance in the classification test, the substance or mixture shall be tested again in the new form.

### 5 Decision logic and guidance

The decision logic and guidance are for reference only. They are given in Annex A. Those responsible for classification are particularly advised to study Clause 4 both before and while using the decision logic.

#### 6.1 General

6.1.1 For the labelling of pyrophoric solids, the hazard categories are listed in the prescribed order of pictogram, signal word and hazard statement. For the hazard classes or categories covered by the United Nations Recommendations on the Transport of Dangerous Goods - Model Regulations, seventeenth revised edition (hereinafter referred to as the Model Regulations), the corresponding graphic mark designated for each category shall be shown on the label. The allocation of label elements for pyrophoric solids is given in Annex B.

6.1.2 The classification criteria and label elements for pyrophoric solids are given in Annex C.