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# Consumer product safety - General principles for hazard identification

消费品安全 危害识别导则

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# Consumer product safety - General principles for hazard identification

## 1 Scope

This standard specifies the hazard source classification and hazard source identification process for the identification of consumer product's safety hazard.

This standard applies to the identification of hazards that affect consumers' personal health and safety and property (goods) losses during the design, production, use stages of consumer products.

## 2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB/T 28803-2012 Directives for risk management of consumer products safety

## 3 Terms and definitions

The terms and definitions as defined in GB/T 28803-2012 as well as the following terms and definitions apply to this document. For ease of use, some terms and definitions in GB/T 28803-2012 are listed repeatedly below.

**3.1**

**Consumer product**

Products designed and produced for but not limited to personal use, including product components, parts, accessories, packaging and instructions for use.

[GB/T 35246-2017, definition 3.1]

**3.2**

**Consumer product safety**

### 5.2.1 Overview

The cause-effect-based consumer product hazard identification method is mainly applicable to the production enterprises in the design, production and use stages of consumer product.

### 5.2.2 Physical hazard's identification process

The identification process mainly includes information collection, characteristic analysis, injury scene construction, analysis of injury scenes, analysis of injury types, selection of hazard identification methods, identification of hazard sources (see Figure 1 for details). The specific analysis is as follows:

a) Information collection: Data collection materials can cover the following aspects: product design plans, instructions for use, structural design instructions, related test data, historical injury data of similar products, literature data, etc.

b) Characteristic analysis: The specific content shall include but not limited to the following:

- Analysis of the characteristics of the use population: use population's gender, age, health status, education level, etc.;

- Analysis of the characteristics of consumer products: consumer product's structure, purpose, use mode, scope of use, etc.;

- Analysis of the characteristics of the use environment: normal use environment, high temperature, high humidity, noise, radiation, high voltage, static electricity, etc.

c) Scenario construction: Using virtual simulation, behavior observation and other methods to simulate the scenario where consumers use a certain consumer product in different usage environments to cause different injuries.

d) Analysis of injury scenarios: Analyze the damage mechanism of the "consumer-product-environment" relationship involved in the injury scenario; analyze the possible consequences of using the product in a specific injury scenario.

e) Analysis of injury type: Based on the above analysis, infer the type of injury that may be caused in a specific injury scenario. For the injury classification, refer to Appendix A of GB/T 28803-2012.

f) Selection of hazard identification method: Refer to Appendix A for the physical hazard's identification method based on the cause-effect method. An identification method can be selected; physical hazard identification

b) Obtain the product bill of materials (BOM) and bill of substance (BOS), learn more about the types of chemical substances that constitute the product;

c) Scenario construction: use virtual simulation, behavior observation and other methods to simulate the scenarios where consumers use certain consumer products in different use environments to cause different injuries;

d) Analyze injury scenarios: learn more about the toxicological information related to human health of the above chemical substances, including but not limited to the following information: acute toxicity, skin corrosion/irritation, serious eye damage/eye irritation, respiratory or skin sensitization, mutagenicity, carcinogenicity, reproductive and developmental toxicity, neurotoxicity, immunotoxicity, specific target organ toxicity. The methods of obtaining the above information include but are not limited to the following methods: Safety Data Sheets (SDS) of chemical substances, databases of various official and authoritative academic organizations, scientific literature, toxicology experiments, etc.;

e) Preliminarily qualitatively judge the accessibility of the substance;

f) According to the methods in Appendix B, use tests and other means to identify chemical hazards.

of identification methods, identification of hazard sources (see Figure 3 for details). The specific analysis is as follows:

a) Information collection: Data collection methods shall include but are not limited to, online public opinion, consumer complaints, injury monitoring, recall notifications, etc.;

b) Scene reproduction: Reconstruct the injury scene according to the acquired injury case;

c) Analyze injury scenarios: Analyze the "consumer-product-environment" relationship and the mechanism of harm in the existing injury cases;

d) Determine the type of injury: Determine the type of injury based on the injury cases that have occurred, see Appendix A of GB/T 28803-2012;

e) Select the hazard identification method: Refer to Appendix A for the physical hazard's identification method based on the result-cause method. An identification method can be selected and the physical hazard identification can be carried out according to the corresponding steps;

f) Determine the hazard source: According to the above analysis, infer the hazard source that caused the injury.

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