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

GB/T 44358-2024

**Dangerous goods - Test method of fragment impact test for
extremely insensitive articles without mass explosion hazard
(1.6 article)**

危险货物 无整体爆炸危险的极端不敏感物品（1.6项物品）碎片撞击试验方法

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document is proposed and coordinated by the National Technical Committee on Hazardous Chemicals Management Standardization (SAC/TC 251). This document was drafted by: Nanjing University of Science and Technology, China People's Public Security University, Xinjiang Tianhe Chemical Co., Ltd., Xi'an Modern Chemistry Research Institute Institute of Chemical Industry, North University of China, Shanghai Institute of Chemical Technology Testing Co., Ltd., China Institute of Safety Science and Technology, and China Petroleum and Chemical Industry Federation. The main drafters of this document are. Xu Sen, Ma Teng, Wang Yanru, Zhang Dan, Yang Yurong, Gao Chao, Zhang Jinju, Feng Xiaojun, Cao Weiguo, Xiao Qiuping, Zhang Jianxin, Chen Sining, Cao Mengran, Chen Yiwen, Hao Yuan. Dangerous goods without mass explosion hazard Fragments of extremely insensitive articles (division

1.6 articles) Impact test method Warning - Personnel using this document should have practical experience in regular laboratory work. Special attention should be paid to the test process involving explosions. The use of products requires relevant qualifications and site conditions or entrusting units with relevant conditions to operate. This document does not indicate all possible Safety issues. Users are responsible for taking appropriate safety and health measures and ensuring that the conditions specified in relevant national laws and regulations are met.

1 Scope

GB/T 44358-2024 gives the fragment impact test used to qualify an article for Division 1.6, the transport classification reserved for extremely insensitive detonating articles that carry no mass explosion hazard. The classification is worth a great deal to a manufacturer, because a 1.6 article is transported and stored under far lighter restrictions than a 1.1 one,

and it is granted only on the evidence of a defined series of tests of which this is one. The test asks a specific question: whether the article detonates when struck by a standard steel fragment at a specified velocity, which represents the case of an adjacent article or a munition fragment striking it. The standard sets the principle, the test article and its condition, the fragment and its dimensions and material, the gun or launcher and the measurement of velocity, the arrangement of the article, the witness plates and the instrumentation, the number of trials, the criteria by which a reaction is judged and classified, and the test report. It took effect on 23 August 2024.

This document specifies the terminology for the fragment impact test method for extremely insensitive articles (division

1.6 articles) without a mass explosion hazard. and definitions, test principles, equipment and materials, tests, data processing and result evaluation. This document is applicable to the assessment of the reactivity of extremely insensitive items when they are partially impacted by high-speed fragments, and can be used as a reference for other explosives.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies. in this document.

GB/T 699 High-quality carbon structural steel

GB/T 700 Carbon structural steel

GB/T 1220 Stainless Steel Bars

GB/T 3077 Alloy structural steel

GB/T 3191 Aluminium and aluminium alloy extruded bars

GB/T 3632 Torsion shear type high strength bolt connection for steel structure

GB/T 5213 Cold-rolled low-carbon steel sheets and strips

GB 6944 Classification and product name number of dangerous goods

GB 19455 Safety specification for inspection of hazardous properties of dangerous goods for civil explosives

GB 19458 General rules for safety inspection of hazardous properties of dangerous goods

GB/T 24511 Stainless steel and heat-resistant steel plates and strips for pressure equipment United Nations "Recommendations on the Transport of Dangerous Goods Model Regulations"

3 Terms and definitions

GB 6944, GB 19455, GB 19458 and the United Nations "Recommendations on the Transport of Dangerous Goods Model Regulations" and the following The terms and definitions apply to this document.

3.1 Mass detonation An explosion affecting almost all matter or objects almost instantaneously.