

ICS 65.060.01

CCS B 20



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

GB/T 46669-2025

**Grain and oils storage - Technical specification for grain
breakage reduction in silo loading**

粮油储藏 筒仓进料降碎技术规范

Issued on: October 31, 2025

Implemented on: May 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the National Food and Strategic Reserves Administration. This document is under the jurisdiction of the National Technical Committee on Standardization of Grain and Oil (SAC/TC270). This document was drafted by: Zhengzhou COFCO Research & Design Institute Co., Ltd., Suzhou Jiesai Machinery Co., Ltd., and Shandong Jinzhong Technology Group. Joint-stock company, Zhengzhou Dagong Engineering Technology Co., Ltd., Henan University of Technology, COFCO Science & Technology (Henan) Engineering Equipment Co., Ltd., China National Grain Reserves Corporation Grain Reserves Management Group Co., Ltd., COFCO Engineering & Technology Yingchun Agricultural and Livestock Machinery (Shandong) Co., Ltd., Jiangsu Guoliang Storage Engineering Co., Ltd., COFCO Engineering Ke Testing & Certification Co., Ltd., Jiangsu Fast Machinery Co., Ltd., Jiangmen Zhenda Machinery Manufacturing Co., Ltd., Shandong Changjiang Grain and Oil Storage Machinery Limited Liability Company, China Grain Reserves Chengdu Research Institute Co., Ltd., Guangdong Provincial Grain Reserves Management Group Co., Ltd., Zhisen Engineering Technology (Group) Co., Ltd. Limited Liability Company, Jiangsu Gutai Grain Machinery Technology Co., Ltd., and Yangzhou Murun Intelligent Technology Co., Ltd. The main drafters of this document are. Sun Huinan, Wang Rong, Ren Shouhua, Tian Yingbin, Li Chuancheng, Su Hongtao, Wang Dianxuan, Wang Yanyan, Wang Song, and Li Kunyou. Wang Binxing, Qin Feng, Luo Dong, Gao Yangyang, Wang Zhun, Wang Renzhen, Hao Yun, Zhou Mengmeng, Jia Xin, Tang Jinxiang, Nie Fangwei, Yang Yuze, Mao Genwu, Xu Qingyu He Donghua, Yang Jingjun, Tang Linbin, Gong Xueneng, Ma Pengfei, Guo Ning, Zhong Qiu, Shi Zongfu, Liang Guozhen, Wu Zhong, Li Haojie. Technical Specifications for Feeding and Crushing of Grain and Oil Storage Silos

1 Scope

GB/T 46669-2025 is the Chinese national standard covering filling a silo without smashing the grain - the drop height and the ladder or spiral chute that breaks it, the impact velocity at the surface, and the breakage measured before and after, because a broken kernel is where storage insects and moulds start. First edition, in force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026.

This document specifies the general technical requirements for silo feeding and crushing, the silo feeding process requirements, the crushing device requirements, and the requirements for silo feeding process equipment. The requirements for construction quality are specified, and the corresponding test methods are described. This document applies to vertical silos, shallow circular silos, and their facilities, equipment, feeding processes, and feeding operations that require measures to reduce grain breakage.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 9286 Paints and varnishes - Cross-cut test

GB/T 10595 Belt Conveyors

GB 14784 Safety Specifications for Belt Conveyors

GB/T 24855 General Technical Requirements for the Assembly of Grain and Oil Machinery

GB/T 24857 General Technical Conditions for Plate Parts and Plate-Shaped Steel Components of Grain and Oil Machinery

GB/T 25218 General Technical Requirements for Coating of Grain and Oil Machinery Products

GB/T 37519 Bucket Elevator for Grain and Oil Machinery

GB/T 50046 Standard for Corrosion Protection Design of Industrial Buildings

GB 50077 Design Standard for Reinforced Concrete Silos

GB 50204 Code for Acceptance of Construction Quality of Concrete Structures

GB 50205 Standard for Acceptance of Construction Quality of Steel Structures

GB 50231 General Specification for Construction and Acceptance of Mechanical Equipment Installation Engineering

GB 50270 Construction and Acceptance Specification for Installation Engineering of

Conveying Equipment

3 Terms and Definitions

The following terms and definitions apply to this document.

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