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

GB/T 44333-2024

Green product assessment - Refractory materials

绿色产品评价 耐火材料

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Foreword

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Co., Ltd. Company, Ruitai Magang New Material Technology Co., Ltd., Zhejiang Huzhou Fuziling Refractory Group Co., Ltd., Yingkou Quanshun Jiaming Refractory Materials Co., Ltd. Hebei Guoliang New Materials Co., Ltd., Henan Rongjin High Temperature Materials Co., Ltd., Beijing Jinyutongda Refractory Technology Co., Ltd. Ltd., Qingdao West Coast High-tech Materials Co., Ltd., Shandong Jiateng Industrial Co., Ltd., Zhengzhou Ruitai Refractory Technology Co., Ltd., Zhengzhou Zhongkexin Materials Co., Ltd., Shandong Yingzhou Energy Saving and Environmental Protection Technology Co., Ltd., Shandong Wanqiao Group Co., Ltd., Haicheng Lier Magxita Materials Co., Ltd. Company, Zibo Yumin Jinuo New Materials Co., Ltd., Zhejiang Cargill Petrochemical Engineering Co., Ltd., Zhengzhou Aoda Refractory Materials Co., Ltd., Chang Xingxingying New Refractory Building Materials Co., Ltd., Jiangsu Hengnai Furnace Material Group Co., Ltd., Shanxi Luweibao Taigang Refractory Materials Co., Ltd., Jiangsu Huayao Guangyu Technology Co., Ltd., Vesuvius Advanced Ceramics (China) Co., Ltd., Huixian Dongfang Refractory Materials Co., Ltd., Wuhan Ruxing Technology Co., Ltd., Zhejiang Zhaoshan Refractory Material Co., Ltd., Jiaozuo Jinxin Hengtuo New Material Co., Ltd., Xinmi Zhenfa Refractory Material Co., Ltd. Co., Ltd., Zibo Chongxin Refractory Material Co., Ltd., Anhui Conch Siam Refractory Material Co., Ltd., Jiangsu Guohao Refractory Technology Co., Ltd., Zhengzhou Fangxin New Materials Co., Ltd., Henan Yuandongli Refractory Materials Technology Co., Ltd., Henan Ruitai Industry Group Co., Ltd., Yixing Xinkai Refractory Material Co., Ltd., Wuhan University of Science and Technology, Jiangsu Langnaide Refractory Material Co., Ltd., Zhengzhou Weitong Electric Melting New Material Technology Co., Ltd. Co., Ltd., Zhengzhou Rongsheng Kiln Refractory Co., Ltd., MCC Wuhan Metallurgical Construction Research Institute Co., Ltd., Yixing Longchang Refractory Co., Ltd. Ltd., Henan Hengli Refractory Materials Co., Ltd., Guizhou Building Materials Product Quality Inspection and Testing Institute, Zhengzhou Anrui Refractory Materials Technology Co., Ltd. company. The main drafters of this document are. Yi Shuai, Li Hongxia, Deng Lina, Xie Jinli, Zhu Yi, Zong Jianfang, Peng Xigao, Yan Haochun, Zhang Xin, Zhong Ying, Si Guodong, Xu Qian, Che Lianfang, Wang Wenxue, He Junjie, Liu Zonglin, Yin Bo, Yin Jun, Xia Lan, Zhang Tongjian, Li Zhijun, Pei Leiping, Ying Liping, Liu Huali, Huang Delin, Zhao Xinli, Zhan Lei, Ye Hang, Hu Jianhui, Xu Linlin, Zhao Wei, Liu Jingxuan, Yan Hao, Han Biao, Yu Yang, Yu Guang, Fang Sheng, Qian Jing, Zhang Junjie, Fu Zhencai, Zhang Wei, Wei Xiaomin, Xie Jianxiong, He Jian, Li Youqi, Tang Jiabin, Li Guangwei, Li Hongbo, Li Weifeng, Li Yongwei, Ma Sikai, Wang Shushan, Shangguan Yongqiang, Yu Yan, Wei Guoping, Wei Fude, Zhu Weike, Qin Yinjun, Wu Huijing, Wang Jinbiao, Tang Sixin, Li Fuchao, Zhang Daoyun, Yin Kunbao, Peng Minglei, Hong Feng, Jin Congjin, Yang Zhenghong, Lü Zhiqian, Zheng Yinlong, Zhang Xiuhua, Tian Zhihong, Long Zhanwei, Li Xiangru, Yan Pengfei, Liu Guihai, Zhang Pengfei, Min Youzhuo, Lu Yongming, Cui Renqu, Wang Saiqiang, Zhai Songnan, Zhang Lianjin, Miao Zheng, Liang Baoqing, Zhao Chenrui, Ma Shulong, Li Yanjing, Li Yong, Zhou Aibao, Wang Lichao, Wang Haixiao, Li Wei, Li Yuanjin, Ma Yuan, Su Xuebin, Gao Jianli, Qian Yudong, Zhao Xianhua, Zhao Xiantang, Ma Jialiang, Zhang Yixian, Yan Jichang, Li Qike, Ma Jijuan, Wang Ming, Wang Yingying, Shan Guoqiang, Wang Qiang, Xu Gao, Han Yawei, Li Gaoping,

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1 Scope

GB/T 44333-2024 is the Chinese green product assessment standard for refractory materials. Refractories are a hidden but very large environmental term in heavy industry: they are fired at high temperature to make, they are consumed and replaced continuously in steel, cement and glass plant, and they leave a waste stream that is both voluminous and, where chrome-bearing, hazardous. The standard sets the basic requirements a product must meet before it can be assessed, and then the evaluation indicators grouped as resource attributes, including the use of recycled refractory material and the yield of the process, energy attributes covering the firing and drying energy, environmental attributes covering the emissions, the wastewater and the avoidance of chromium-bearing formulations, and quality attributes covering the service performance and life of the product, since a refractory that lasts twice as long halves everything else. Each indicator carries its limit and its test or verification method, and the standard sets the evaluation method and the rules for a claim. It took effect on 23 August 2024.

This document specifies the evaluation requirements for green refractory product evaluation and describes the evaluation methods. This document applies to refractory raw materials, dense shaped refractory products, shaped insulating refractory products, unshaped refractory materials and prefabricated parts. Green product evaluation of materials.

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 to This document.

GB/T 191 Pictorial markings for packaging, storage and transportation

GB/T 2589 General rules for comprehensive energy consumption calculation

GB/T 2997 Test method for bulk density, apparent porosity and true porosity of dense shaped refractory products

GB/T 5072 Test method for compressive strength of refractory materials at room temperature

GB/T 5073 Test method for compressive creep of refractory materials

GB/T 15432 Determination of total suspended particulate matter in ambient air by gravimetric method

GB/T 16157 Determination of particulate matter in exhaust gas from stationary sources and sampling methods for gaseous pollutants

GB 18597 Hazardous waste storage pollution control standard

GB 18599 Pollution control standard for general industrial solid waste storage and disposal sites

GB/T 18930 Terminology of Refractory Materials

GB/T 19001 Quality Management System Requirements

GB/T 23331 Energy Management System Requirements and Usage Guide

GB/T 24001 Environmental Management System Requirements and Usage Guide