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

GB/T 32151.39-2025

**Greenhouse gas emission accounting and reporting
requirements - Part 39: Calcined gypsum enterprises**

温室气体排放核算与报告要求 第39部分：建筑石膏生产企业

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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. This document is part 39 of GB/T 32151. GB/T 32151 has been published in the following parts.

1. Power generation enterprises;
2. Grid enterprises;
3. Magnesium smelting enterprises;
4. Aluminium smelting enterprises;
5. Iron and steel production enterprises;
6. Civil aviation enterprises;
7. Flat glass production enterprises;
8. Cement production enterprises;
9. Ceramic production enterprises;
10. Chemical production enterprises;
11. Coal production enterprises;
12. Textile and clothing enterprises;

1 Scope

China's national requirements for greenhouse gas emission accounting and reporting by calcined gypsum producers. It is Part 39 of GB/T 32151 and specifies the calculation steps, the determination of the accounting boundary and emission sources, the accounting requirements and emission calculation, the data quality management, and the content and format of the report, with a boundary schematic, a report format template, default values for fossil fuel parameters, a steam enthalpy table, a data quality control plan template and a normative annex on the selection of the electricity carbon dioxide emission factor. Calcined gypsum, also called building gypsum or plaster of Paris, is made by heating gypsum until it gives up three quarters of its water of crystallisation and becomes the hemihydrate. That single fact gives the sector an emissions profile quite unlike the other building material industries covered by this series, and it is worth stating plainly: gypsum calcination releases water, not carbon dioxide. Cement and lime manufacture decompose carbonates and emit carbon dioxide chemically, which is why their process emissions are large and irreducible by fuel switching. Gypsum has no such term. Its emissions come only from the fuel burnt to provide the heat and from the electricity and heat purchased, which means every one of them can in principle be eliminated by changing the energy supply. The calcination temperature is also low - a matter of a hundred and fifty degrees rather than the fourteen hundred of a cement kiln - so the energy required per tonne is far smaller, and electrification is a realistic option in a way it is not for cement. A large and growing share of the feedstock is also desulfurisation gypsum recovered from power station flue gas scrubbing, which is a by-product rather than a quarried mineral. Issued on 24 January 2025 and in force since 1 August 2025.

This document specifies the calculation steps, calculation boundaries and emission source determination, calculation requirements and Emissions calculations, data quality management requirements, report content and format. This document applies to the accounting and reporting of greenhouse gas emissions from construction gypsum production enterprises.

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 213 Method for determination of calorific value of coal

GB/T 384 Determination of calorific value of petroleum products

GB/T 11062 Calculation method for calorific value, density, relative density and Wobbe index of natural gas

GB 17167 General rules for the allocation and management of energy metering instruments in energy-consuming units

GB/T 24851 Requirements for the deployment and management of energy metering equipment in the building materials industry

GB/T 32150 General principles for accounting and reporting of greenhouse gas emissions from industrial enterprises JJG195 Verification procedures for continuous cumulative automatic weighing instruments (belt scales) JJG1118 Verification Procedure for Electronic Truck Scale (Weighing Instrument Load Measuring Instrument Method) JJG2063 Liquid flow meter calibration system table JJG2064 Gas Flow Metering Equipment Calibration System Table

3 Terms and definitions

The terms and definitions defined in GB/T 32150 and the following apply to this document.

3.1 calcined gypsum It is made from natural gypsum or industrial by-product gypsum by calcining and dehydrating at a certain temperature, with beta-calcium sulfate hemihydrate ($\beta\text{-CaSO}_4 \cdot 1/2\text{H}_2\text{O}$) It is a powdered cementitious material used as the main component and is not pre-added with any admixtures or additives. [Source: GB/T 9776-2022, 3.1]

3.2 Greenhouse gas The natural and human-caused gases in the atmosphere that absorb and emit radiation from the Earth's surface, atmosphere, and clouds. The gaseous component of radiation with wavelengths in the infrared spectrum.

Note. The greenhouse gases referred to in this document include only carbon dioxide (CO_2). [Source: GB/T 32150-2015, 3.1, modified]