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

GB/T 45425-2025

Fog warning levels

雾的预警等级

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1 Scope

This document specifies the classification of fog warning levels and the rules for issuing them.

This document applies to operational fog warning work over land; related operations may refer to it.

2 Normative references

The contents of the following document constitute an indispensable provision of this document through normative reference in the text. For dated references, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies to this document.

GB/T 27964-2011 Grade of fog forecast.

3 Terms and definitions

The following terms and definitions apply to this document.

Fog: a visible aggregate of a large number of fine, milky-white water droplets or ice crystals suspended in the atmosphere in the layer near the ground. [SOURCE: GB/T 27964-2011, 2.1]

Visibility: for a person of normal sight, under the prevailing weather conditions, the greatest horizontal distance at which, by day, a target near the ground (black and of suitable size) can be seen and identified against the background of the sky, and, by night, the greatest horizontal distance at which a light source of moderate intensity can be seen and identified.

Note: the smallest luminance contrast that the eye of a person of normal sight can detect (the contrast threshold) is 0.05. [SOURCE: GB/T 27964-2011, 2.2, modified]

National basic weather station: a surface meteorological observing station set up to meet the needs of nationwide climate analysis and weather forecasting. [SOURCE: QX/T

685-2023, 3.1]

National reference climatological station: a surface meteorological observing station set up, according to the national climate regionalisation and the requirements of the Global Climate Observing System, in order to obtain long-term, continuous data that are sufficiently representative. [SOURCE: GB 31221-2014, 2.3]

4 Classification

Fog warning levels are classified on the basis of visibility, and are determined by the visibility thresholds specified in Table 1 of GB/T 27964-2011.

Fog warnings are divided into three levels, which from the lowest to the highest are the yellow warning, the orange warning and the red warning.

5 Issuing rules

The issuing of fog warning levels shall follow the rules below.

Yellow warning: fog with a visibility of less than 1000 m is forecast to occur within the region in the next 24 h, together with patches of fog with a visibility of less than 500 m, or such fog has already occurred and will persist; here, patches of fog with a visibility of less than 500 m means fog covering five or more adjacent national basic weather stations or national reference climatological stations, or covering an area amounting to 10 per cent or more of the area of the region.

Orange warning: fog with a visibility of less than 500 m is forecast to occur within the region in the next 24 h, together with patches of fog with a visibility of less than 200 m, or such fog has already occurred and will persist; here, patches of fog with a visibility of less than 200 m means fog covering five or more adjacent national basic weather stations or national reference climatological stations, or covering an area amounting to 10 per cent or more of the area of the region.

Red warning: fog with a visibility of less than 200 m is forecast to occur within the region in the next 24 h, together with patches of fog with a visibility of less than 50 m, or such fog has already occurred and will persist; patches of fog with a visibility of less than 50 m means fog covering five or more adjacent national basic weather stations or national reference climatological stations, or covering an area amounting to 10 per cent or more of the area of the region.