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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 27967-2024

Replacing GB/T 27967-2011

Format of road weather forecast

公路交通气象预报格式

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0 Changes from the 2011 edition

Beyond structural and editorial changes, three technical changes are listed. The format rules for the graphic forecast have been added as a new clause 6. The tables that graded precipitation intensity, wind force, fog and sandstorm visibility have been dropped, these being annexes A, B and C of the 2011 edition. A normative annex fixing the colours for road sections affected by adverse weather has been added.

The document records that GB/T 27967 was first published in 2011 and that this is its first revision.

3 Terms and definitions

A road weather forecast is defined as a weather forecast whose main subject is the adverse weather affecting road sections and whose main audience is the transport authorities, the public security authorities and the general public.

A note sets out what adverse weather means here: weather affecting the safety and flow of road traffic, such as rain, snow, sleet, freezing rain, fog, high temperature, strong wind, sandstorm and thunderstorm. Four of these are given numerical thresholds. Fog counts when visibility drops below 1000 m; high temperature counts from 35 degrees Celsius upward; strong wind counts when the mean wind speed passes 8 m/s or a gust passes 13.9 m/s; sandstorm counts when visibility drops below 500 m.

5 Text format of the forecast

The text forecast carries five things: a heading, the adverse weather, the period of impact,

the road sections affected, and safety advice for travellers.

The heading carries the time of issue, the issuing body, the validity period and the geographical extent. The time of issue is Beijing time, recorded as year, month, day, hour and minute in the pattern YYYY year MM month DD day HH hour TT minute, and may be shortened where that is reasonable. The issuing body is given by its full name and has to be a body entitled to issue the product. The validity period carries a start and an end time to the same precision; where the two fall in the same year, month, day or hour that part may be dropped, and where the time falls on the hour the minutes may be dropped. The geographical extent names the administrative area the forecast covers.

The adverse weather is described in summary terms, both its intensity and how far it reaches. For rain and snow the precipitation grade may be given, following GB/T 28592. For fog and sandstorm the visibility grade may be given, following GB/T 27964 and GB/T 20480. For wind the wind force grade may be given, following GB/T 28591.

The period of impact may be given for the main adverse weather, with a start and an end time written as the validity period is written.

Affected sections may be grouped either by the main kind of adverse weather or by road route. They are listed in the order of the administrative class of the route, national, provincial, county and township, and within one class in ascending order of route number. Route names and numbers follow GB/T 917.

Three ways of describing a section are allowed. The first names the towns it runs between, as route name and number followed by up to four town, county, district or banner names and the word section, the towns being listed in the direction the route runs; a provincial boundary may serve as one of the nodes. The second names the region it crosses, as route name and number followed by the region and the word section. The third is a summary, such as the whole of a route, most of a route, part of a route, or the part of a route lying in a stated direction from a named town. All three may be used together in one forecast.

The safety advice answers the needs of the transport authorities, the public security authorities and the public, in the light of what the adverse weather may do to road traffic.

6 Graphic format of the forecast

The graphic forecast is drawn on the road network and carries a heading, the validity period, the issuing body, the time of issue, a legend, the adverse weather with its colour coding, and geographic information.

The road network is to be clearly legible, with route numbers and short road names marked where needed, again following GB/T 917. The heading carries the name of the forecast and the geographical extent. Validity period, issuing body and time of issue follow the same rules as in the text forecast, and the time of issue is preferably written together with the

issuing body.

The legend is preferably placed so that it hides no useful information on the map; it takes in every affected section shown and its colour, the colour sample on the left and its meaning on the right, and may carry further notes on administrative divisions, rivers and lakes.

The colour given to an affected section is chosen with the severity of the effect on road traffic in mind and follows the normative annex. Sections not affected may be coloured freely, provided the colour does not clash with those the annex fixes. Geographic information follows GB/T 12343.2.

B Annex B, colours for affected road sections

The normative annex fixes an RGB value for each of nineteen kinds of adverse weather.

For rain the values are moderate rain 199,255,191; heavy rain 68,208,68; rainstorm 0,150,80; heavy rainstorm and above 0,70,32; sleet 255,190,239.

For snow the values are light snow 173,226,245; moderate snow 94,180,234; heavy snow 0,111,196; snowstorm 0,50,190; heavy snowstorm and above 0,0,254.

For fog the values are fog 248,248,66; dense fog 255,181,33; thick dense fog 172,115,0; very thick dense fog 100,67,0.

The remaining five are sandstorm 102,0,0; strong wind 182,120,203; freezing rain 116,225,232; thunderstorm 245,179,153; high temperature 233,69,52.

A Annex A, worked example

An informative annex reproduces a full national road weather forecast, issued jointly by the China Meteorological Administration and the Ministry of Transport at 18:00 on 7 September 2023 for the period from 20:00 on the 7th to 20:00 on the 8th.

The example shows the shape the rules give in practice: an opening paragraph on the weather expected over the named provinces, a line of advice, then the main period of impact of the heavy rain and a list of the routes affected grouped by rainfall grade, followed by the main period of impact of the fog and lists of routes grouped by fog grade. Every section is written as a route name with its number followed by the towns it runs between or the region it crosses.