

ICS 43.160
CCS T 50



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

GB 28373-2012

**Tank vehicles of categories N and O with regard to rollover
stability**

N类和O类罐式车辆侧倾稳定性

(English Translation)

Issued on: May 11, 2012

Implemented on: January 1, 2014

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

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2 x CDRESi

2 x CDRESi

4 --- Calculated factor in meters per meter (m/rad).

2 x (FE x AT x HG)

2 x (AT x HG)

Foreword

The contents of Chapter 4, Chapter 5 and Chapter 6 of this Standard are mandatory and the rest are recommended.

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard refers to ECER111-2001 regulations "on the stability of the terms of the approval of N and O-type tank motor vehicle uniform regulations

Set "to develop. The main technical contents of this standard and ECER111-2001 regulations are as follows.

- ECER111-2001 Regulation applies to the European Agreement on International Transport of Dangerous Goods Road (ADR Agreement)

Of the dangerous goods of the tank vehicles, this standard applies to tank cars and tank trailers.

--- ECER111-2001 regulations in the calculation of the calculation limit for the lateral acceleration of not less than 4m/s^2 , the standard calculation by calculation

The ratio of lateral acceleration to gravitational acceleration shall not be less than 0.408.

--- Added Chapter 7 Sampling and Conformity Determination.

This standard is proposed by the National Development and Reform Commission.

This standard by the National Automotive Standardization Technical Committee (SAC/TC114) centralized.

The drafting of this standard. Hanyang Special Purpose Vehicle Research Institute, China Automotive Technology Research Center, CIMC Vehicle (Group) Co., Ltd., China

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1 Scope

This standard specifies the terms, definitions, limits, actual test methods, simulations, and pumping methods for the roll stability of N and O tank vehicles.

Like and qualified.

This standard applies to N2, N3 tank cars and O3, O4 tank trailers.

2 normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article

Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 17350 terms and codes for special vehicles and special trailers

3 terms and definitions

The following definitions and definitions of the following definitions and definitions apply to this document.

3.1

Flip the critical point rollover threshold

All the wheels on the side of the vehicle are disengaged from the tilting table surface in an instantaneous state.

3.2

Suspension device bogie

An axle group with a load distribution compensation function in which the wheels on one side of all wheels can simultaneously achieve zero

load.

3.3

Tank filling rate filling ratio of the tank

The ratio of the volume of the cargo filled in the tank to the geometric volume of the tank.

4.1 Limits of actual vehicle test method

4.1.1

The static roll stability of the vehicle shall be such that, when the angle of the roll table reaches 23° in the roll test on the left and right sides,

The vehicle should not roll.

4.1.2

If the vehicle has exceeded one of the three tests on the left or right side, a repeat test is allowed. Repeated trial is still not

Up to the requirements of the static stability of the vehicle was judged to be unqualified.

4.1.3

In the roll test, the vehicle parts which do not come into contact during normal use shall not be exposed to the test.

4.2 Limits of simulation calculations

The ratio of the lateral acceleration to the gravitational acceleration calculated by the calculation should not be less than 0.408.

5.1.1 Test device

The tilting table shall have sufficient rigidity and shall not exhibit any significant deformation under the conditions of maximum test load. In order to prevent the vehicle from being tested

During the test, slide should be set close to the position of the tire. The anti-skid stop should

not affect the test results.

5.1.2 Wind conditions

In the ground 10m height, the test device center for the radius of 30m radius, the lateral wind speed should not exceed 3m/s, the total wind

Speed should not exceed 5m/s.

5.1.3 Tires

For test vehicles under rated load conditions, the pressure in the tire should be equal to the pressure specified by the vehicle manufacturer. In the cold state, inflated

The pressure tolerance is 2%.

5.1.4 Vehicle components

5.1.4.1

All vehicle components (including spring conditions and settings, other suspension assemblies and suspension shapes, etc.) that may affect the test results shall be

In the state prescribed by the manufacturer.

5.1.4.2

The height adjustment of the suspension shall be in a closed state (maintained as a static value) during the roll test. Suspension on both sides of the fork

The link should be in an invalid state.

5.2 Accuracy of test equipment

The measurement accuracy of the test device shall not be less than 0.3 °.

5.3 Non-powered vehicles

If the test vehicle is a semi-trailer, trailer or other trailer, the vehicle may be carried out in conjunction with a tractor or a replacement tractor

Test. If the tractor affects the test results, other tractors or other alternative devices that do not affect the test results should be used.

5.4.2 The axle load of each shaft shall not exceed the maximum permissible shaft load.

5.4.3 Water or other non-hazardous materials may be used as an alternative load to design the loaded articles for testing. The tank filling rate shall not be small