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

GB/T 262-2010

Replacing GB/T 262-1988

**Petroleum products and hydrocarbon solvents -- Determination
of aniline point and mixed aniline point**

石油产品和烃类溶剂苯胺点和混合苯胺点测定法

(English Translation)

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Foreword

This revised standard adopts the International Standard ISO 2977:1997 "Petroleum products and hydrocarbon solvents aniline point and mixed aniline point determination" (English Chinese Version).

This standard is based on ISO 2977:1997 re-drafted.

In order for China's national conditions, the use of this standard in the ISO 2977:1997 when modified. This standard and ISO 2977:1997 knot See Appendix A. Structure Differences
This standard and ISO 2977:1997 The main technical differences are as follows.

--- This standard adds support for GB/T 514 Thermometer technology standard references in Chapter 2, normative references in order to replace ISO 2977:1997 Appendix F "thermometer Specifications" simplified method;

--- This standard using only ISO 2977:1997 method I. Method III and Method five, delete the ISO 2977:1997 method of the second test Brunette given sample film apparatus method and the method for the determination of four volatile sample a small amount of content, is rarely used because in our country;

--- This standard increases the technical requirements of potassium hydroxide reagent in 5.4, to regulate and define the specifications of the reagent used;

Tube and casing size --- This standard is a method used to increase the tolerance specified (see 7.2.1) in order to standardize the instrument plus Workers accuracy requirements;

--- The standard delete the ISO 2977. F "thermometer Specifications" appendix in 1997, a direct reference to the relevant content GB/T 514 in GB -75 Number, GB and GB No. No. -76 -77 thermometer technical requirements to simplify and standardize the method of using a thermometer;

--- The standard 10.1 aniline point and mixed aniline point accuracy of the results of the report has been modified, ISO 2977:1997 specified in 9.1 Results are reported to the

nearest 0.05 °C, the provisions of this standard results are reported to the nearest 0.1 °C, with the thermometer scale value and temperature test Determination harmonized requirements;

--- The standard 11.1 repetitive provision was amended on light-colored transparent aniline point and mixed aniline point samples, ISO 2977:1997

10.1 The provisions of 0.16 °C, the provisions of this standard is 0.2 °C, and the results are shown to be consistent and to facilitate comparison.

This standard replaces GB/T 262-1988 "Determination of aniline point of petroleum products." this standard compared with GB/T 262-1988 main changes are as follows.

--- The standard name from "petroleum products Determination of aniline point" to "Petroleum products and hydrocarbon solvents aniline point and mixed aniline point measured Fixed ";

--- In Chapter 1, we increased the range of hydrocarbon solvents aniline point and mixed aniline point determination sample content;

--- The method is divided into three parts, a method for the determination of the manual method of light-colored transparent samples, a method of increasing two automatic measuring instrument Light and dark content of the sample, and a method of increasing three measured aniline point temperature is significantly volatile content of the sample;

--- Remove the GB/T 262-1988 Determination of U-tube method dark samples;

--- In Chapter 3, the terms and definitions Term Definition added mixed aniline point and bubble point;

--- 5.3 CKS heptane reagent purity requirements by the GB/T 262-1988 6.4 analytical requirements to not less than 99.75%;

--- The method used in the liquid glass thermometers requirements (see 7.2.3) by the GB/T 262-1988 in compliance with the provisions of the original 5.5 GB/T 514 melting point thermometer modified to comply with current GB/T in GB No. -75 514, GB and GB No. No. -76 -77 temperature Meter;

--- In Chapter 6, the preparation of samples, detailed steps to increase the sample preparation process;

--- When measuring light transparent sample aniline point (see 7.3.1), the sample size specified by the GB/T 262-1988 8.1 in 5mL of benzene Amine and the specimen modify 10mL 5mL and 10mL sample aniline;

--- In measuring light transparent samples, GB/T 262-1988 Thermometer temperature specified in 8.1 bubble located aniline and the sample layer Boundary layer, the present standard methods modified to a depth of immersion thermometer is in line aniline - a

mixture of liquid sample position (see 7.3.1);

--- The measurement light transparent sample aniline point test procedure described in greater detail (see 7.3);

--- Increasing the measurement step sample mixed aniline point (see 7.4);

--- Increasing the content and results of the evaluation indicated (see Chapter 10);

--- Precision repeatability provisions of the GB/T 262-1988 Chapter 9 colored samples Determination of aniline point somewhat modified by the addition of benzene Reproducing provisions amine point measurement, and increased measurement accuracy mixed aniline point (see Chapter 11).

Appendix A of this standard is an informative annex.

This standard by the National Standardization Technical Committee on products and lubricant oil (SAC/TC280) proposed.

This standard by the National Standardization Technical Committee of petroleum products lubricants oil and lubricants and fuels Technical Committee (SAC/TC280/SC1) centralized.

1 Scope

1.1

standard specifies the method for determination of petroleum products and hydrocarbon solvents aniline point, and when the sample is less than aniline point - a sample mixture Determination mixed aniline point above the crystallization temperature of the product aniline.

1.2

a standard method for the determination of an initial boiling point above room temperature, aniline and aniline point below - the sample mixture bubble point and above its pour point Transparent samples.

1.3

The second method is suitable for automatic determination of a suitable instrument samples and a method of deep color can not be measured sample.

1.4

Method three standard applicable to the determination of aniline point temperature at significantly volatile sample, such as aviation gasoline.

Note 1: The aniline point (or mixed aniline point) analysis to characterize properties of pure hydrocarbons and hydrocarbon mixtures having a supporting role. Lowest aniline point aromatics, paraffins most High, between aromatic and naphthenic paraffins and olefins in aniline point. Homologs, aniline point of hydrocarbons with increasing relative molecular mass increases.

Note 2: Although aniline point with other physical properties of hydrocarbons associated method for combining conducted analysis of hydrocarbons, but is most often used for aniline point hydrocarbon mixtures the aromatics content of estimates.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 514 Petroleum products test glass liquid thermometer technical conditions GB/T 6540 Petroleum products - Determination of color

3 Terms and Definitions

The following terms and definitions apply to this standard.

Aniline point an equal volume of aniline and a minimum equilibrium temperature of the sample mixture was dissolved, to "°C" Fig.

Mixed Aniline Point Minimum balance between the volume of aniline, a volume of the sample and a volume of a mixture of n-heptane solution temperature to "°C" Fig.

Bubble point when heated under standard conditions, the temperature of the mixture bubbles appear at the beginning, in order to "°C" representation.

4 Summary

The predetermined volume of aniline and the sample or aniline and the sample adding n-heptane in a test tube, the mixture was stirred. Heating the mixture at a controlled rate Thereof, until the mixture is completely miscible in two phases. Then press the mixture was cooled at a controlled rate, record temperature when a mixture of two-phase separation