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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 38265.2-2019

Test methods for soft soldering fluxes -- Part 2: Determination of non-volatile matter -- Ebulliometer method

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Foreword

GB/T 38265 "Test Method for Solder Flux" is divided into the following parts.

--- Part 1. Determination of non-volatile matter content gravimetric method;

--- Part 2. Determination of non-volatile matter content by boiling point method;

--- Part 3. Determination of acid value Potentiometric titration and visual titration;

--- Part 5. Copper Mirror Test;

--- Part 6. Determination of halide (excluding fluoride) content;

--- Part 8. Determination of zinc content;

--- Part 9. Determination of ammonia content;

--- Part 10. Test method for spreading of soldering flux wetting properties;

--- Part 11. Solubility of flux residue;

--- Part 13. Determination of flux splashability;

--- Part 14. Evaluation of tackiness of flux residues;

--- Part 15. Copper corrosion test;

--- Part 16. Wetting balance method of soldering flux wetting performance;

--- Part 17. Surface insulation resistance comb test and electrochemical migration test of flux residues.

This part is Part 2 of GB/T 38265.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the redrafting method to modify the use of ISO 9455-2..1993 "Test

Methods for Solder Part 2. Non-volatile Substances

Determination of boiling point method.

The technical differences between this part and ISO 9455-2..1993 and the reasons are as follows.

--- With regard to normative quotation documents, this part has been adjusted with technical differences to adapt to China's technical conditions and adjustments

The situation is reflected in Chapter 2 "Regulatory Reference Documents", with specific adjustments as follows.

* Replaced ISO 9454-1..1990 with GB/T 15829 modified to adopt international standards;

* Deleted the cited international standards ISO 4791-1. 1985 and IEC 60068-2-20. 1979;

* Added reference to GB/T 6379 (all parts).

This section also made the following editorial changes.

--- Amend the standard name to "Part 2 of Test Methods for Solder Flux. Determination of Non-Volatile Matter Boiling Point Method";

--- Chapter 6 formula (1), the content of non-volatile matter in the solder sample is expressed as w (mass fraction).

This part is proposed and managed by the National Welding Standardization Technical Committee (SAC/TC55).

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Wave) limited company.

1 Scope

This part of GB/T 38265 stipulates the boiling point method for the determination of the non-volatile matter content in the solder flux, including the method principle, equipment, test

Inspection steps, test data processing, precision, test reports, etc.

This section applies to liquid solders containing highly volatile solvents in the types 1.1.1, 1.1.2 and 1.1.3 defined in GB/T 15829,

And the flux with the content of non-volatile matter is not less than 10%.

Note. For the liquid flux with lower volatility of the solvent than isopropyl alcohol, the determination of the non-volatile matter content of the flux should adopt the gravimetric method.

2 Normative references

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

Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

GB/T 6379 (all parts) Accuracy of measurement methods and results (correctness and precision) [ISO 5725 (all parts)]

GB/T 15829 Classification and performance requirements of solder flux (GB/T 15829-2008, ISO 9454-1..1990, ISO 9454-2.

1998, MOD)

3 Principle

Weigh a certain amount of solder sample and evaporate in the boiling point meter until the volatile substances are completely removed, the degree of removal depends on the distillation temperature

With the distillation time, the flux residue is the non-volatile substance in the flux sample.

4.1 Martin Boiling Point Meter

The Martin boiling point meter with a spherical distillation flask is shown in Figure 1.

Note. When a spherical bottle is used instead of the pear-shaped bottle matching Martin Boiler, the heat exchange between the heat source and the distillation bottle will be better.