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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 38265.1-2019

Test methods for soft soldering fluxes -- Part 1: Determination of non-volatile matter -- Gravimetric 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 1 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 9455-1..1990 "Test Methods for Solder Part 1. Non-volatile Substances

Determination of gravimetric method.

The technical differences between this part and ISO 9455-1..1990 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;

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

This section also made the following editorial changes.

--- Amend the standard name to "Part 1 of Solder Flux Test Method. Determination of Non-Volatile Matter Weight Method";

--- In Chapter 6, formula (1), the content of non-volatile matter in the flux test is expressed by w (mass fraction).

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

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1 Scope

This part of GB/T 38265 stipulates the gravimetric method for the determination of the content of non-volatile substances in soldering fluxes, including method principles,

instruments and equipment,

Test procedure, test data processing, precision, test report, etc.

This section applies to Type 1 liquid and paste solder as defined in GB/T 15829.

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

The prepared, weighed solder sample is heated in a boiling water bath, and then dried in the furnace to remove volatile substances. After cooling again

Weigh and calculate the percentage content of non-volatile matter.

4.2 Weigh the pipette, the capacity is 20mL ~ 25mL, used for liquid solder sampling.

4.3 The boiling water bath can hold distilled water, has heating conditions, and can continue to keep warm under boiling conditions.

5 Test procedure

5.1 Place the petri dish (4.1) in the drying oven (4.4) to dry. Cool the Petri dish to room temperature in a desiccator (4.5) and weigh the quality of the Petri dish

The amount is accurate to 0.001g.

5.2 Put an appropriate amount of solder sample that meets the requirements of GB/T 15829 into a Petri dish (5.1), and weigh its mass to the nearest 0.001g.

Ensure that the solder sample in the petri dish can produce 0.5g ~ 1.0g non-volatile matter. At the same time, measures should be taken to prevent swings during weighing

Hair loss. For liquid solder samples, a pipette (4.2) should be used for sampling.

5.3 The petri dish (5.2) is heated in a boiling water bath (4.3) to fully evaporate the volatile substances.