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

GB/T 38265.16-2019

**Test methods for soft soldering fluxes -- Part 16: Flux efficacy
test -- Wetting balance method**

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78 .2012, IDT)

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Foreword

GB/T 38265 `` Testing Method for Solder " is divided into the following parts.

- Part 1. Determination of non-volatile matter content by gravimetric method;
- Part 2. Determination of non-volatile matter content by boiling point method;
- Part 3. Determination of acid value by 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. Spread test method for solder wettability;
- Part 11. solubility of flux residues;
- Part 13. Determination of solder splash;
- Part 14. Evaluation of the stickiness of flux residues;
- Part 15. Copper corrosion test;
- Part 16. Wetting balance method of solder wetting performance;
- Part 17. Surface insulation resistance comb test and electrochemical migration test of flux residue.

This part is the 16th part of GB/T 38265.

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

This part uses the redrafting method to modify and adopt ISO 9455-16..2013 "Testing

methods for solders-Part 16. Testing of flux efficacy

Test Wetting Balance Method.

This part has structural changes compared to ISO 9455-16..2013. Appendix A lists the chapters of this part and ISO 9455-16..2013.

Bar number comparison list.

The technical differences between this part and ISO 9455-16..2013 and their causes are as follows.

--- Regarding the normative references, this section has made adjustments with technical differences to suit China's technical conditions and the situation of adjustment.

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

* Added reference to national standard GB/T 686;

* Replace ISO 9453 with reference to GB/T 3131 adopting international standards and modify GB/T 20422 adopting international standards;

* Replace ISO 9454-1 with GB/T 15829 which adopts international standards;

--- Added terms and definitions (see Chapter 3);

--- Added the normative Appendix B "Technical Requirements for Wetting Balance Test System" to facilitate standard applications;

--- Deleted the appendix B (normative appendix) of ISO 9455-16..2013.

The following editorial changes have also been made in this section.

--- Amend the standard name to "Solder Test Method Part 16. Wetting Balance Method of Wetting Performance of Solder".

--- Informative appendix A "Structural changes of this part compared with ISO 9455-16..2013" has been added to facilitate application and ISO

Standard control.

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 specifies the test method for evaluating the wettability of solders--wetting balance method, including method principle, test

Agent, equipment, test piece, test procedure, standard solder test, test data description, test data processing, test report, etc.

This section applies to all types of liquid solder.

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 undated references, the latest version (including all amendments) applies to this document.

GB/T 686 chemical reagent acetone

GB/T 2423.3-2016 Environmental test Part 2. Test method Test Cab. Constant humidity test (IEC 60068-2-

78 .2012, IDT)

GB/T 2423.28-2005 Environmental testing for electric and electronic products Part 2. Test methods Test T. Soldering (IEC 60068-

2-20. 1979, IDT)

GB/T 2423.32-2008 Environmental test for electric and electronic products. Part 2. Test methods Test Ta. Wettable weighing method

(IEC 60068-2-54..2006, IDT)

GB/T 3131 tin-lead solder

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

1998, MOD)

GB/T 20422 lead-free solder (GB/T 20422-2018, ISO 9453..2014, MOD)

3 terms and definitions

The terms and definitions defined in GB/T 15829 and the following apply to this document.

3.1

Wetting force

The force generated by the molten solder in the vertical direction of the metal sheet infiltration, including the corresponding buoyancy.

3.2

Solder bath

It can hold solder, has heating device to melt the solder, and can keep heat at a certain temperature.

4 Symbols and descriptions

The symbols, units and corresponding descriptions used in this section are shown in Table 1.