

**CHEMICAL INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

HG/T 5751-2020

**Insulating flame-retardant adhesive tapes for power battery
housings**

动力电池外壳用绝缘阻燃胶粘带

(English Translation)

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Foreword

SAC/TC 185 (National technical committee of standardization for Adhesives) is in charge of this English translation. In case of any doubt about the contents of English translation, the Chinese original shall be considered authoritative.

This standard is drafted in accordance with the rules given in the GB/T 1.1-2009. Directives for standardization-Part 1: Structure and drafting of standards.

1 Scope

This standard specifies the product classification, technical requirements, test methods, inspection rules, marking, packaging, transport, and storage of flame retardant insulation tape for EV battery.

This standard is applicable to single-sided flame retardant insulation tape with plastic film (such as polyethylene terephthalate, PET and polyimide, PI) as backing and pressure sensitive adhesive uniformly coated on one side of the backing.

2 Normative references

The following referenced documents are indispensable for the application of this document.

For dated normative references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 191 Packaging - Pictorial marking for handling of goods

GB/T 1408.1-2016 Insulating materials - Test methods for electric strength - Part 1: Test at power frequencies

GB/T 1410-2006 Methods of test for volume resistivity and surface resistivity of solid electrical insulating materials

GB/T 2792 Measurement of peel adhesion properties for adhesive tapes

GB/T 2828.1 Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 2829 Sampling procedures and tables for periodic inspection by attributes (Apply to inspection of process stability)

GB/T 4850 Test method for unwinding force of pressure sensitive adhesive tapes at low speed

GB/T 4851-2014 Measurement of static shear adhesion for adhesive types

GB/T 6388 Transport package shipping mark

GB/T 7125 Test method for thickness of adhesive tapes

GB/T 15903 Test method for flame resistance of pressure-sensitive adhesive tapes

GB/T 22396 Terminology relating to pressure sensitive adhesive products

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GB/T 26125 Electrical and electronic products - Determination of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)

GB/T 31125 Test method for adhesive tapes - Loop tack

GB/T 32370 Determination of the length and width for adhesive tapes

ASTM D1000:2017 Standard test methods for pressure-sensitive adhesive-coated tapes used for electrical and electronic applications

EN 14582:2016 Waste Characteristic Halogen and Sulfur Content Closed System Oxygen Combustion and Determination Method (Characterization of waste. Halogen and sulfur content. Oxygen combustion in closed systems and determination methods)

3 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 22396 apply.

4 Classification

According to different backings, products can be divided into PET adhesive tape and PI adhesive tape.

5.1 Appearance

The adhesive tape shall be evenly wound on the core without obvious pin holes, deformation, air bubbles, wrinkles, oozing, serious gapping, adhesive hardening, slivering, impurities and other stain.

5.2 Number of joints

Joints shall not be permitted for adhesive tape used in automatic battery production lines, and at most one joint shall be permitted for each roll of adhesive tape used in manual production lines. Special specifications and colors (including permissible number of joints and joint methods, etc.) shall be determined by both supplier and customer through negotiation.

5.3 Specification and dimension Product

specification and dimensional tolerance shall be in accordance with Table 1. They can also be agreed between supplier and customer.

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7.2.1 Thickness

It shall be measured according to GB/T 7125.

7.2.2 Width and length

It shall be measured according to GB/T 32370.

7.3 Adhesion properties

7.3.1 180o peel adhesion 180o peel adhesion under normal state is tested according to GB/T 2792.

180o peel adhesion after damp-heat aging is aged according to 6.3 conditions and tested according to GB/T 2792 method after 2 hours at room temperature.

7.3.2

Static shear adhesion

Static shear adhesion under normal state is tested according to the provisions of Method A in GB/T 4851-2014, and the sample size is 24 mm X 24 mm.

Static shear adhesion after damp-heat aging shall be aged according to 6.3 conditions, and tested according to Method A in GB/T 4851-2014 after 2 hours at room temperature.

7.3.3

Loop tack

Loop tack under normal state shall be carried out according to those specified in GB/T 31125.

Loop tack after damp-heat aging is aged according to 6.3 conditions and tested according to GB/T 31125 method after 2 hours at room temperature.

7.3.4

Unwinding force at low speed

Unwinding force at low speed under normal state shall be determined according to GB/T 4850.

Unwinding force at low speed after damp-heat aging is aged according to 6.3 conditions,