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

GB/T 22875-2018

Replacing GB/T 22875-2008

Super-absorbent polymer for sanitary towel and diapers

纸尿裤和卫生巾用高吸收性树脂

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 22875-2008 "Super-absorbent polymer for sanitary towel" and GB/T 22905-2008 "Super-absorbent polymer for diaper". As compared with GB/T 22875-2008 and GB/T 22905-2008, the main changes of this standard are as follows: - INTEGRATE the two standard contents of GB/T 22875-2008 and GB/T 22905-2008, MODIFY the standard name; - ADD the product classification; - ADJUST the index requirements and determination methods of residual monomer (acrylic acid); - ADJUST the method for determining the volatile content; - ADJUST the absorption speed indicator requirements; - ADJUST the size of the pressure absorption test device; - ADD the yellowing value, extractables content index and determination method; - ADD the sampling requirements. Please note that some of the contents of this document may involve patents. The issuing organization of this document is not responsible for identifying these patents. This standard was proposed by the China National Light Industry Council. This standard shall be under the jurisdiction of the National Paper Industry Standardization Technical Committee (SAC/TC 141). Drafting organizations of this standard. China Pulp and Paper Research Institute, Zhejiang Satellite New Material Technology Co., Ltd., Yixing Dansen Technology Co., Ltd., Sumitomo Refined Trade (Shanghai) Co., Ltd., Nishao Chemical (Zhangjiagang) Co., Ltd., Banglida (Fujian) New Materials Co., Ltd., Sandaya Fine Chemicals (Nantong) Co., Ltd., Yangzi Petrochemical-BASF Co., Ltd., LG Chemical (China) Investment Co., Ltd., Wanhua Chemical Group Co., Ltd., National Paper Quality Supervision and Inspection center. The main drafters of this standard. Gao Jun, Qiu Wenlun, Li Defei. This standard replaces the standard previously issued as follows: - GB/T

22875-2008; - GB/T 22905-2008. Super-absorbent polymer for sanitary towel and diapers

1 Scope

GB/T 22875-2018 is the Chinese national standard on super-absorbent polymer for sanitary towel and diapers, in the field of paper technology. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 7 June 2018 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2019. Classification: ICS 85.080, CCS Y39. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the product classification, requirements, test methods, inspection rules and marking, packaging, transportation and storage of polyacrylate super-absorbent polymers for sanitary towels and diapers. This standard applies to polyacrylate super-absorbent polymers which are used by all kinds of paper diapers (sheets, pads) and sanitary towels (pads). The super-absorbent polymers which are used by other disposable sanitary products may make reference to this standard.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB/T 6682 Water for analytical laboratory use - Specification and test methods

GB/T 7974 Paper, board and pulps - Measurement of diffuse blue reflectance factor - D65 brightness (Diff/Geometry, outdoor daylight conditions)

3 Product classification

The super-absorbent polymer is divided into the super-absorbent polymer for paper diapers (sheets, pads) and the super-absorbent polymer for the sanitary towels (pads) in accordance with the use of the product.

4 Requirements

The technical indicators of the super-absorbent polymer for paper diapers (sheets, pads) and sanitary towels (pads) shall comply with the requirements of Table 1.

5 Test methods

5.1 Sampling Before sampling, it shall first shake the container which contains the sample for 3 times ~ 5 times, to mix the sample uniformly. Then place it for 5 min, open the package to take out the sample.

5.3 Volatile content The volatile content is determined in accordance with Appendix B.

5.4 pH pH is determined in accordance with Appendix C.

5.5 Distribution of particle size The distribution of particle size is determined in accordance with Appendix D.

5.6 Density Density is determined in accordance with Appendix E.

5.10 Absorption amount under pressure The absorption amount under pressure is determined in accordance with Appendix I.

5.11 Extractables content Extractable content is determined in accordance with Appendix J.

5.12 Appearance Place the specimen in normal light to perform visual inspection.

6 Inspection rules

6.1 Provisions on inspection batch The products which are produced by the same raw material, the same process and the same period of time form a batch, the amount of each batch does not exceed 500 t.

6.3 Rules for decision When the inspection product meets the requirements of this standard or contract, it is judged to be qualified; when any of the inspection items fails, it is judged to be unqualified.

6.4 Quality assurance The manufacturer shall ensure that the product quality meets the requirements of this standard or contract.

7.1 Sales mark and packaging

7.1.1 The product sales package shall be marked with the following contents.

7.2 Transportation and storage

7.2.1 The products shall be transported by means which are rain-proof, moisture-proof, and clean. It shall not be transported together with contaminated materials.

Appendix A

(Normative) Determination of residual monomers (acrylic acid) A.1 Principle The sample is extracted by physiological saline, the residual monosodium acrylate and acrylic acid in the

sample are transferred to the solution. After 1 hour, the solution is filtered, the filtrate is taken and subjected to high performance liquid chromatography to measure the content of acrylic acid, the result is based on the content of acrylic acid.

A.2 Reagents and materials

Unless otherwise specified, only chromatographic reagents are used.

A.2.1 Water, GB/T 6682, level I.

A.2.7 Acrylic standard stock solution (1000 mg/L). WEIGH 0.1000 g of acrylic acid (A.2.6), accurate to 0.0001 g, PUT it into a 100 mL volumetric flask, USE water to dilute it to 100 mL.

A.2.8 Acrylic standard intermediate solution (100 mg/L). PIPETTE 10 mL of acrylic acid standard stock solution (A.2.7) into a 100 mL volumetric flask, USE water to dilute it to 100 mL.

A.3 Instruments and equipment

A.3.1 High performance liquid chromatography.

A.3.2 UV detector, the detector wavelength of 210 nm.

A.3.3 Balance, the sensitivity is 0.0001 g.

A.3.4 Beaker, the capacity is 250 mL.

A.3.5 Magnetic stirrer and stir bar.

A.3.6 Membrane filter, the membrane's pore size is 0.45 μm .

A.3.7 C18 column, 5 μm , 4.6 mm x 150 mm or equivalent column, suitable for guard column.

A.3.8 C18 guard column, 5 μm ,