

JIS

JAPANESE INDUSTRIAL STANDARD

**Testing method
for water absorption rate
of super absorbent polymers**

JIS K 7224—1996

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Errata are also provided to subscribers of JIS (English edition) in *Monthly Information*.

## JAPANESE INDUSTRIAL STANDARD

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Testing method for water absorption  
rate of super absorbent polymers

K 7224-1996

1. Scope This Japanese Industrial Standard specifies the testing method for water absorption rate of super absorbent polymer which has 10 g/g or more water absorption capacity, using a vortex method.

Remarks 1. The grain size of the super absorbent polymer to be employed for this test shall be 60µm or more. The grain size of the sample used in the measurement influences the dispersion of test results, therefore it is preferable to make the grain-size distribution fall in as narrow range as possible so as to get measured values in less dispersion.

When grain size is less than 60µm, it shall follow the agreement between the parties concerned with delivery.

2. The standards cited in this Standard are as follows.

JIS K 0069 Test methods for sieving of chemical products

JIS K 6900 Plastics – Vocabulary

JIS K 7100 Standard atmospheres for conditioning and testing of plastics

JIS K 8150 Sodium chloride

JIS R 3503 Glass apparatus for chemical analysis

JIS Z 8401 Rules for rounding off of numerical values

2. Definitions The definitions of terms mainly used in this Standard shall be as follows except those defined in JIS K 6900.

(1) super absorbent polymers The polymer which can highly absorb water and swells. Super absorbent polymer, hydrophilic material with crosslinking structure, absorbs water by contacting with water, and has a feature that it hardly dehydrates even when applying pressure after once absorbing water.

(2) water absorption capacity Mass of water absorbed by super absorbent polymers per its unit mass.

(3) water absorption rate Mass of testing liquid absorbed in the sample of unit mass during unit period from when super absorbent polymer begins to absorb the liquid to the end point specified in this Standard.

(4) deionized water Water from which almost all existing ions are removed. Its electric conductivity shall be 10 µS/cm or less.

3. Conditioning of sample and testing liquid, and temperature and humidity for test

3.1 Conditioning of sample and testing liquid Sample and testing liquid shall be principally conditioned in standard temperature condition Grade 2 (23 ± 2°C) specified in JIS K 7100 for at least 24 hours, prior to test.