



**Commercial name**

**PROPADYN**

**Company identification**

Producer: PROPAGROUP S.p.A.

Address: Via Genova, 5/B - 10098 RIVOLI (Turin) - Italy

[www.propagroup.com](http://www.propagroup.com) - [www.propadyn.com](http://www.propadyn.com) - [info@propagroup.com](mailto:info@propagroup.com)

Tel. +39 011 9507777 - Fax +39 011 9507800

**1. Description and use**

Propadyn is a passive humidity controller, able to stabilise humidity levels in confined spaces, from small boxes to shipping containers, during transport and storage.

Propadyn is the best solution to move and store goods vulnerable to humidity fluctuations, such as fruit, vegetables, chemical products, art works, coffee, tobacco and many more. Additionally, Propadyn is designed to stabilise the climatic conditions in all spaces subject to humidity level changes, such as camping tents, gyms, boats, etc..

Propadyn does not need activation and does not require electricity: it is provided ready to use and can maintain constant relative humidity levels between RH = 30% and RH = 80%.

**2. Physical and chemical properties**

Compared to conventional humidity controllers, Propadyn has excellent absorption capacity, as shown in the graph below. This particular characteristic makes it the ideal choice when it comes to storing a range of different goods, such as sugar or coffee, (RH = 30 - 40%), art work or musical instruments (RH = 40 - 60%), tobacco or vegetables (RH = 70 - 80%).

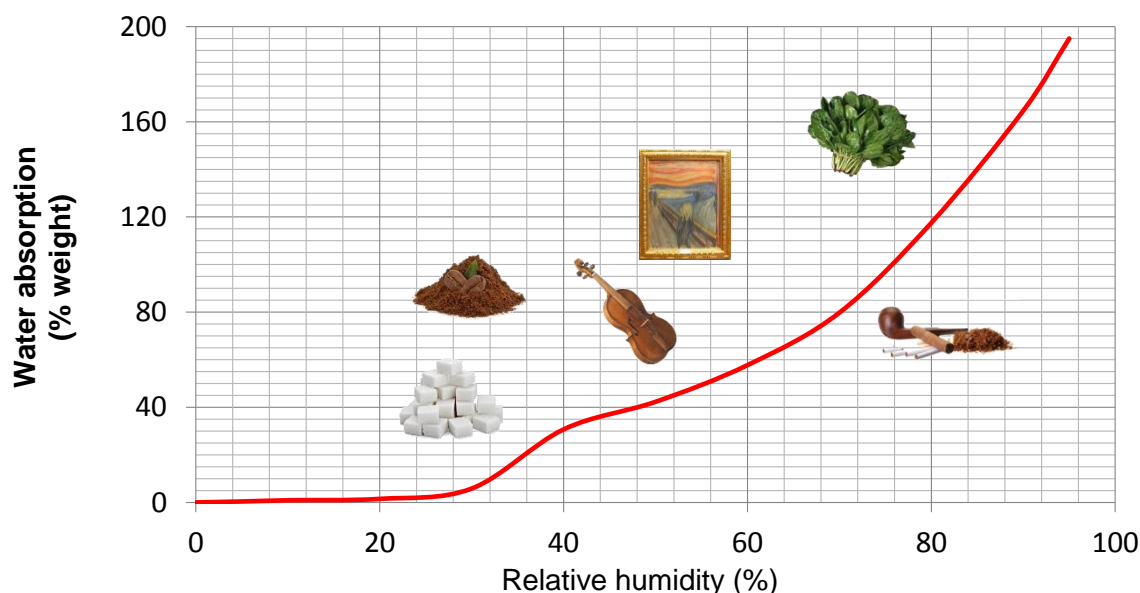
## TECHNICAL SPECIFICATIONS

Document: ST 210  
Edition: 1  
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**PROPADYN**



### Propadyn Absorption capacity at 23°C



Its capacity to stabilize humidity is represented by the value  $M$ , defined as the amount of water (in grams) that 1 kg of controller absorbs or releases when relative humidity increases or decreases by 1%. A high  $M$  value indicates high capacity of regulating humidity.

As the controller's capacity of absorbing water varies with the level of humidity,  $M$  is calculated for each humidity range of interest. The table below shows the values of  $M$  that characterise Propadyn's excellent performances:

Relative humidity	$M$
30% - 40%	24.9
40% - 50%	11.6
50% - 60%	15.4
60% - 70%	22.0
70% - 80%	37.8

Propadyn is a safe and biocompatible product, because each of its ingredients is natural and comes from the food sector.

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PROPADYN



### 3. Package Format

Propadyn is provided, depending on the requirements, at a specific humidity level included between 30% and 80% RH, in the following formats:

- **Propadyn 3200:**  
300 x 115 x 12 mm box containing 200 g of active material \*
- **Propadyn 3400:**  
300 x 115 x 24 mm box containing 400 g of active material \*

\* Weight reference RH = 45%

The boxes have a rigid polypropylene structure and transpiring fabric through which the active material exchanges humidity with the exterior.

### 4. Use

Propadyn does not require pre-conditioning and starts working the moment it is taken out of its protective packaging. Therefore, we recommend it is placed in the position in which it will be used as soon as possible after being opened.

Propadyn 3400 can stabilise approximately up to 1 m<sup>3</sup> of air, depending on the environment conditions and the type of use (ventilation, external climatic fluctuations, humidity range tolerated, etc.).

Propadyn was designed and developed to be reusable. Once its capacity to control moisture is exhausted, through a specific Propagroup regenerating treatment, it can be brought back to its original RH level, completely restoring its characteristics.

### 5. Technical Data

- Humidity controlling capacity: between RH 30% and RH 80%
- Controlling tolerance:  $\pm 3\%$  RH
- Density (active material): 1,1 - 1,5 g/cm<sup>3</sup>

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### 6. Packaging

Each box of Propadyn is wrapped in a protective packaging with laminated barrier, allowing the product's characteristics to remain unaltered until the time of use.

Propadyn is available in 240 x 165 x 385 mm boxes in the following quantities:

- Propadyn 3400: 8 pieces per box;
- Propadyn 3200: 14 pieces per box.

### 7. Certifications

Propadyn acts as a flame retardant and is EN 13501-1 certified according to the European Classification system.

Additionally, certified compressibility tests (ISO 9052-1) and vibration damping tests (ASTM E 756-98) show that Propadyn is an excellent building insulation material, thanks to its ability to reduce vibrations (footsteps, for example), without modifying shape or geometry.

### 8. Warning

To avoid alterations of the product, we recommend avoiding immersing Propadyn in water or water solutions, as halide solutions could be released.

### 9. Production and Quality

PROPAGROUP is UNI EN ISO9001 / ISO14001 certified and produces in accordance with the requirements of the main European and international standards in the sector.