



# TECHNICAL DATA SHEET

CARNAUBA WAX

Revision: 15a – 05/18/2025

## Identification

|                    |                                                           |
|--------------------|-----------------------------------------------------------|
| PRODUCT NAME:      | CARNAUBA WAX                                              |
| INCI NAME:         | Copernicia Prunifera                                      |
| CAS NUMBER:        | 8015-86-9                                                 |
| EC NUMBER:         | 232-399-4                                                 |
| FDA GRAS NUMBER:   | 184.1978                                                  |
| INS NUMBER:        | 903                                                       |
| EU REACH:          | Exempt (Regulation (EC) No 1907/2006, Annex V, Article 9) |
| HS CODE/NCM:       | 15.21.1000                                                |
| MOLECULAR FORMULA: | C <sub>7</sub> H <sub>5</sub> HgNO <sub>3</sub>           |
| MOLECULAR WEIGHT:  | N/A                                                       |

## General Information:

Carnauba palm grown only in the northeastern part of Brazil where the soil is dark and fertile. Quality and color vary with the age of the leaves, with the younger leaves providing the Prime T-1, and the older leaves provides the T-3 and T-4 wax.

According to IFOAM standards and equivalence with European Regulations (EC) 834/2007, 889/2008 and their amendments, in EU, carnauba wax cannot be bleached with hydrogen peroxide.

## Products Delivered:

- T1 Organic presented in Flakes, Lumps or Powder Form extracted exclusive by water
- T3 Organic presented in Flakes, Lumps or Powder Form extracted exclusive by water
- T4 Organic presented in Flakes or Lumps Form extracted exclusive by water

## Applications:

Pharmaceutical, Cosmetics, Lipsticks, Salves, Ointments, Candies, Shoe Polishes, Furniture Polishes, Wood and Car Polishes, Lacquers, Varnishes, Carbon-paper Coatings, Leather Finishes, Electrical – Insulating Composition, Textiles, Inks, Mold Lubricants, Creams, Pill and Paper Glazing, Solvent Based, Water Based (emulsions), Sheet Fed, Heat Set, Hot Melt, Off Set Thermal Transfer Ribbon, UV Curable, Overprint Varnish, etc.

## Carnauba Wax Composition:

Many analyses of Carnauba Wax has been carried out with conflicting results. According to a thorough investigation, Carnauba Wax has the composition given below:

|                                             |        |
|---------------------------------------------|--------|
| Aliphatic Esters                            | 38-40% |
| Diesters of 4-hydroxycinnamic acid          | 20-23% |
| Esters of $\omega$ -hydroxycarboxylic acids | 12-14% |
| Free Alcohols                               | 10-12% |
| Diesters of 4-methoxycinnamic acid          | 5-7%   |
| Free Aliphatic acids                        | 4%     |
| Free aromatic acids                         | 1%     |
| Hydrocarbons (paraffins)                    | 0.3–1% |
| Free $\omega$ -hydroxycarboxylic acids      | 0.5%   |
| Triterpene diols                            | 0.4%   |
| Unsaponifiable components                   | 56.4%  |
| Saponifiable components                     | 39.2%  |
| Aromatics and/or resins                     | 5-7%   |



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**Shelf Life:** 07 years minimum in cool and dry storage.

**Packaging:** 25 Kg LDPE bags / 25 Kg PP bags / 25 Kg Paper bags / 500 Kg Big bags.

**Health & Safety:** Detailed advice on the Health & Safety aspects of this product is in the individual product Safety Data Sheet (SDS-GHS).

## Typical Characteristics:

| ANALYSIS                                          |                        | STANDARD SPECIFICATIONS                                                                 |                              |                              |
|---------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------|------------------------------|------------------------------|
|                                                   |                        | T - 1                                                                                   | T - 3                        | T - 4                        |
| <b>MELTING POINT (°C/°F)</b>                      | Min - Max<br>Min - Max | 82.5 – 86.0<br>180.5 - 187.0                                                            | 82.5 – 86.0<br>180.5 - 187.0 | 82.5 – 86.0<br>180.5 - 187.0 |
| <b>MOISTURE (%)</b>                               | Max                    | 0.5                                                                                     | 0.5                          | 1.0                          |
| <b>VOLATILE MATERIALS (%)</b><br>(175°C/347°F)    | Max                    | 0.6                                                                                     | 1.0                          | 1.0                          |
| <b>ACID VALUE (mg KOH/g)</b>                      | Min<br>Max             | 2.0<br>7.0*                                                                             | 4.0<br>11.0*                 | 4.0<br>11.0*                 |
| <b>SAPONIFICATION (mg KOH/g)</b>                  | Min<br>Max             | 78.0<br>95.0                                                                            | 78.0<br>95.0                 | 78.0<br>95.0                 |
| <b>ESTER VALUE (mg KOH/g)</b>                     | Min<br>Max             | 71.0<br>88.0                                                                            | 71.0<br>88.0                 | 71.0<br>88.0                 |
| <b>ASH CONTENT (%)</b>                            | Max                    | 0.10                                                                                    | 0.30                         | 0.30                         |
| <b>RESIDUE ON IGNITION (%)</b><br>(SULPHATED ASH) | Max                    | 0.25                                                                                    | 0.25                         | 0.25                         |
| <b>IMPURITY (%)</b>                               | Max                    | 0.05                                                                                    | 0.05                         | 0.05                         |
| <b>FLASH POINT (°F)</b>                           |                        | 520                                                                                     | 520                          | 520                          |
| <b>LEAD (mg/Kg)</b>                               |                        | ≤ 2.0                                                                                   | ≤ 2.0                        | ≤ 2.0                        |
| <b>ARSENIC (mg/Kg)</b>                            |                        | ≤ 3.0                                                                                   | ≤ 3.0                        | ≤ 3.0                        |
| <b>MERCURY (mg/Kg)</b>                            |                        | ≤ 1.0                                                                                   | ≤ 1.0                        | ≤ 1.0                        |
| <b>HEAVY METALS (µg/g)</b>                        | Max                    | 20                                                                                      | 20                           | 20                           |
| <b>UNSAPONIFIABLE MATTER (%)</b>                  | Min - Max              | 50 – 55                                                                                 | 50 – 55                      | 50 – 55                      |
| <b>RELATIVE DENSITY</b>                           |                        | 0.997                                                                                   | 0.997                        | 0.997                        |
| <b>COLOR (Gardner Scale)</b>                      |                        | 2.0 – 6.0                                                                               | 6.0 – 10.0                   |                              |
| <b>PEROXIDE INDEX (mEq/g)</b>                     | Max                    | 30                                                                                      | 30                           |                              |
| <b>AVERAGE PARTICLE SIZE</b><br>(D50) (µm)        | Powder<br>Wax          | 50 – 70                                                                                 | 50 – 70                      | 50 – 70                      |
| <b>95% MATERIAL PASSING (mesh)</b>                | Powder<br>Wax          | 100                                                                                     | 100                          | 100                          |
| <b>SOLUBILITY</b>                                 |                        | Practically insoluble in water & alcohol. Soluble on warming in Ethyl Acetate & Xylene. |                              |                              |

\*Food Grade Acid Value Limit: 7.0 mg KOH/g according to point 2 of the Ph.Eur and USP monographs.

**Regulatory:** GMO Free, Not tested on Animals, BSE/TSE Free, Vegan, Allergens not present, CSPO/RSP0/MSPO Free, Irradiation Free, Paraben Free and Nut Free.