



TECHNICAL DATA SHEET

CARNAUBA WAX

Revision: 15 – 02/24/2025

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 ₇ H ₅ HgNO ₃
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.

Products Delivered:

- T1 Conventional or Organic presented in Flakes, Lumps or Powder Form
- T3 Conventional or Organic presented in Flakes, Lumps or Powder Form
- T4 Conventional or Organic presented in Flakes or Lumps Form

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 analysis 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 ω -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 ω -hydroxycarboxylic acids	0.5%
Triterpene diols	0.4%
Unsaponifiable components	56.4%
Saponifiable components	39.2%
Aromatics and/or resins	5-7%



TECHNICAL DATA SHEET

CARNAUBA WAX

Revision: 15 – 02/24/2025

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
MELTING POINT (°C/°F)	Min - Max Min - Max	82.5 – 86.0 180.5 - 187.0	82.5 – 86.0 180.5 - 187.0	82.5 – 86.0 180.5 - 187.0
MOISTURE (%)	Max	0.5	0.5	1.0
VOLATILE MATERIALS (%) (175°C/347°F)	Max	0.6	1.0	1.0
ACID VALUE (mg KOH/g)	Min Max	2.0 7.0*	4.0 11.0*	4.0 11.0*
SAPONIFICATION (mg KOH/g)	Min Max	78.0 95.0	78.0 95.0	78.0 95.0
ESTER VALUE (mg KOH/g)	Min Max	71.0 88.0	71.0 88.0	71.0 88.0
ASH CONTENT (%)	Max	0.10	0.30	0.30
RESIDUE ON IGNITION (%) (SULPHATED ASH)	Max	0.25	0.25	0.25
IMPURITY (%)	Max	0.05	0.05	0.05
FLASH POINT (°F)		520	520	520
LEAD (mg/Kg)		≤ 2.0	≤ 2.0	≤ 2.0
ARSENIC (mg/Kg)		≤ 3.0	≤ 3.0	≤ 3.0
MERCURY (mg/Kg)		≤ 1.0	≤ 1.0	≤ 1.0
HEAVY METALS (µg/g)	Max	20	20	20
UNSAPONIFIABLE MATTER (%)	Min - Max	50 – 55	50 – 55	50 – 55
RELATIVE DENSITY		0.997	0.997	0.997
COLOR (Gardner Scale)		2.0 – 6.0	6.0 – 10.0	
PEROXIDE INDEX (mEq/g)	Max	30	30	
AVERAGE PARTICLE SIZE (D50) (µm)	Powder Wax	50 – 70	50 – 70	50 – 70
95% MATERIAL PASSING (mesh)	Powder Wax	100	100	100
SOLUBILITY		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/RSPO/MSPO Free, Irradiation Free, Paraben Free and Nut Free.