



High-Melting Soy Waxes

Airable Research Lab has synthesized a range of polyurethane-based, higher-melting waxes with a variety of distinctive properties. These bio-derived waxes provide an alternative to high-performing carnauba, paraffin, and montanic waxes. Airable's singular wax is made from widely available resources, allowing for effective and stable supply chains.

TECHNOLOGY

Triglycerides are converted into a linear structure to increase their crystallinity, reflected in increased melting points. Typical melting points are 10 to 50 degrees over standard hydrogenated vegetable oils. These variations in chemistry have other impacts on physical properties, reflected in notable improvements in gloss, smoothness, and overall appearance. Applications include lubricants in industrial processes and the manufacture of plastics, rubbers, and ceramics. These waxes may enhance the flow and aid in dispersion in material processing.

Wax	Tm (°C)	Gloss (60°)	Color L	Color a	Color b	Biocontent (%)
Airable U-110	82	2.5	87.11	-0.8	-0.9	70
Airable U-118	129	80	65.4	-1.3	-2.2	70
Carnauba	80-83	20	67.5	-1.3	3.0	100

BENEFITS

- Free of petroleum-based paraffins, imported carnauba waxes, and montanic acids
- High bio-based content
- Higher melting point
- Hard
- Glossy and low-color
- Water-repellant

This technology is available for sampling. Please get in touch with us if these materials are of interest. We can adjust the chemistry to meet your specific technical targets.