



Prowaxx™ 1601 FR

ExxonMobil Specialties , United States

Product Description

Prowaxx 1601 FR is a high melt point, fully refined [FR] paraffin wax that is compositionally engineered to work well in numerous rheological industrial applications such as hot melt adhesives, PVC manufacturing, wax blends and emulsions. Prowaxx 1601 FR can be used in any hot melt adhesives (HMA) formulation and demonstrates exceptional performance in adhesives used for flexible cardboard food containers, specifically fridge and freezer applications. It is also used in the plastics industry as an anti-slip processing aid, enabling extrusion of PVC. It is a translucent crystalline material in the solid state and a water white, low viscosity, clear liquid when molten. It is derived from petroleum via a carefully controlled refining process yielding a food grade wax with low to no odor. Prowaxx 1601 FR is primarily comprised of straight chain normal paraffin hydrocarbons, which impart excellent gloss and water repellent properties.

The ExxonMobil fully refined waxes, such as Prowaxx 1601 FR, meet the requirements for the Food and Drug Administration (FDA) standards for indirect food contact substances and contain an oxidation inhibitor to improve stability.

Prowaxx 1601 FR is biodegradable under composting conditions according to ASTM D6400 using ASTM D5338.

ExxonMobil waxes are produced and controlled according to the ExxonMobil Product Quality Management System, EN ISO 9000 or equivalent standard.

Features and Benefits

*User must check compliance with applicable regulations.

| Features | Advantages and Potential Benefits |
|--|---|
| Narrow high melt point range | Fast set point in HMA formulations Achieve optimal fusion time of the PVC |
| Highly crystalline structure | Fast set point in HMA formulations |
| Low oil content | Minimal oil migration Less than 1% oil in wax |
| Controlled molecular composition and homogenous distribution | Superior adhesion formulation performance in fiber tear at lower temperatures Enables optimal flexibility in processing conditions during PVC extrusion |
| Lower viscosity | HMA formulations: <ul style="list-style-type: none"> Enhances flow onto the substrate and improves surface wetting Lower adhesive processing time PVC wax formulations: <ul style="list-style-type: none"> Allows optimal migration of wax out of PVC matrix to metal surface lubrication Improved distribution in PVC matrix |
| Colorless and translucent in solid state | Clarity in HMA formulations does not interfere with package designs |
| Oxidation resistance | Superior shelf life enables improved product stability |

| Features | Advantages and Potential Benefits |
|---|---|
| Low to no odor | No cross-odor contamination |
| Food grade quality | Can be safely used as a component of nonfood articles in contact with food* |
| Primarily straight chain normal paraffin hydrocarbons | Outstanding water repellent properties Excellent gloss |

Applications

Prowaxx 1601 FR can be used in the following applications subject to applicable laws and regulations in each jurisdiction*:

- Hot melt adhesives
- PVC manufacturing
- Wax blends and emulsions
- Pillar candles [outer core]
- Crayons
- Antiozonant wax for rubber and tires

*User must check compliance with applicable regulations

Regulations and Claims

This product is registered to the requirements of:

International Biodegradable Products Institute, Inc. BPI Compostable Certificate

This product meets or exceeds the requirements of:

FDA 21 CFR 178.3710

ASTM Biodegradable according to ASTM D6400-12 using ASTM D5338-11

Properties and Specifications

| Property | Standard Method(a) | Min | Max |
|---|--------------------|-----------|-----------|
| Flash Point, Cleveland Open Cup, °C (F) | ASTM D92 | 220(428) | |
| Melting Point, °C (F) | ASTM D87 | 68.9(156) | 73.3(164) |
| Oil Content, wt% | ASTM D721 | | 0.75 |
| ASTM Saybolt D156 Color (ASTM D6045 Acceptable) | ASTM D6045 | 26 | |
| Odor, Wax | ASTM D1833 | | 1 |

Note 1: Products are certified on release to meet the values specified. Actual values may deviate within the established reproducibility of the test method specified.

Note 2: For purpose of determining conformance with specification, observed or calculated values shall be rounded off to the nearest unit in the last significant digit used in expressing the limiting value in accordance to the ASTM E 29 method

(a) In lieu of standard test method, alternate test methods may be used for the certification of a product property.

Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ <http://www.msds.exxonmobil.com/psims/psims.aspx>

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