

TARWAX E

DESCRIPTION:

Tarwax E is a synthetic wax with a common chemical name, **N, N'-Ethylene-Bis-Stearmide**. This product has excellent colour and colour stability and special property showing the low viscosity in molten form under high temperature.

PROPERTIES:

Stability: Tarwax E is a stable high melting compound. Its melting point is significantly higher than that of a comparable monomer.

Compatibility: Tarwax E is compatible with most waxes and plasticizers. The polarity of its two central amide group and the non-polarity of the two fatty chains make this product an excellent surface-active agent which is incompatible with virtually all solvents and most polymer systems. When incorporated into polymers Tarwax E will "bloom" to the surface, coating it with a monomolecular layer. Its incompatibility is the basis for several other properties and many of the products commercial applications.

Lubricity: This product's fatty chain imparts excellent slip properties to surfaces upon which it collects. Because of this, Tarwax E is a good blending agent. Corrosion Resistance: A coating of Tarwax E will improve surface's resistance to salt, heat, moisture and most solvents.

Antistatic Properties: Tarwax E will lower static charge generation in plastic film by reducing friction at the surface. Electrical Properties: Tarwax E can be used in many electrical applications without detracting from the electrical properties of the resins into which it is incorporated.

SPECIFICATIONS:

Appearance:	White Powder
Melting Point °C:	141 – 146
Acid Value (Mg-KOH/Gm):	8.0 (max.)
Amine Value (Mg-KOH/Gm):	2.0 (max.)
Moisture (%):	0.5 (max.)
Volatile Matter (%):	0.5 (max.)
Flash Point °C:	>290

PACKAGING:

25 kgs Polylined HDPE / LDPE woven sacks or Paper bags.

SAFETY AND HANDLING:

Tarwax E is not primary skin irritant, non-corrosive and non-flammable, is not regulated by the department of transportation (DOT). Avoid contact with skin and eyes. In case of accidental eye contact, flush with large amounts of water and call a physician. If swallowed, call a physician. Refer the material safety data sheet for further safety and handling information. (CAS No. 110-30-5)

Application in Plastic Industry

Molded Plastic:

When incorporated into plastic molding powder, Tarwax E facilitates the powders flow into all parts of the mold. It also improves pigment dispersion and mold release and, by reducing friction, it reduces static charges, thereby reducing dust pickup. Tarwax E is also recommended as a mold release agent for Acetal and PBT. Tarwax E is used as Antiblocking and Slip Agent for thermoset & thermoplastic resins.

Rigid PVC:

Tarwax E improves the flow characteristics of the PVC melts acting as internal / external lubricant and anti blocking agent. The dosage may vary from 0.05 to 0.3 phr.

Plasticized PVC:

In plasticized PVC films, Tarwax E acts as a very effective anti blocking agent. Recommended usage level vary between 0.1-1.0 phr. Depending on film thickness and percentage of plasticizers.

ABS resins and Polystyrene:

Tarwax E increases the flow characteristics of Polystyrene and ABS. In pigmented products it acts as a dispersing agent as well. The suggested dosage varies between 0.5-2.0 % for ABS resins and 0.15-0.30 % for Polystyrene.

Polyolefins:

Tarwax E can be used in Polyolefins as a pigment dispersant aid at suggested dosage: 0.25-0.5 phr. It is also suitable as anti blocking agent for the production of LDPE films.

Polyamides:

In Polyamides 6 and 6.6, Tarwax E is used as an internal mold release at suggested dosage: 0.1-0.3 phr.

Acetal Resins:

In Acetal Resins, Tarwax E is used as surface lubricant and mold release agent. Suggested amount 0.25 phr.

Polyurethanes:

In injection molding of thermoplastic PUR, Tarwax E acts as an internal mold release agent at suggested amount 0.1 – 1.0%.

Application in Other Industry

Cellophane :

Tarwax E can be used as a static reducing and anti block additive in cellophane coatings. At levels of 0.1-0.5% by weight this products will aid rather than interfere with heat-sealing operation.

Paper Coatings :

Tarwax E at approximately 1% improves the slip and gloss of paraffin/polymer coating for paper and paperboard used in food packaging. Because of its high melting point, this product will not decompose during heat-sealing operations.

Hot – melting adhesives :

Tarwax E functions as a co-solvent or coupling agent for the polyamide resin and paraffin wax components of hot melt adhesives. A typical formulation is 78% polyamide resin, 12% paraffin wax & 10% Tarwax E.

Adhesive tape :

To prevent adhesive tape from sticking to itself when it is rolled up, Tarwax E is used to impart antiblock properties which does not reduce the tape's effectiveness in the final end use.

Asphalts and Potting compounds :

Tarwax E also finds application as component of specialized asphalts used in coating electrical cables (as filters and insulations), blends for electrical potting compounds, mastic heat sealers for condensers and other related uses. Tarwax E will reduce the cold flow of these asphalts , while providing suitable electrical properties, the asphalt's softening point can be raised approx. 10°F for each 1% Tarwax E added.

Rubber :

Tarwax E provides antiblock and lubricity properties when used in molding & extrusion of synthetic rubbers such as GRS, ABS, Hycar, Butyl and Neoprene. It also improves water immersion and chemical resistance of rubber stocks.

Dental Waxes :

Tarwax E contributes to the accuracy of immersion and clean release of dental waxes.

Powdered metallurgy :

Tarwax E can be used at 0.5% as a lubricant and molding aid in powdered metal molding. This product burn-offs as well or better than fatty acids and allow for denser compacting of the powdered metal.

Wire Drawing :

Tarwax E can be replace conventional fatty acid soaps as powdered lubricants in wire drawing operations. Its higher melting point allows higher drawing speeds for hard wires.

Lacquers and Coatings :

Tarwax E can be used as pigment grinding aid and dispersant in paints, stains, lacquers and coatings to improve weatherability, resistance to practically all solvents, acids and alkalies. Tarwax E imparts chemical resistance to many types of coatings.

Defoaming Agent :

Tarwax E can be used in pulp paper and textile industries as a defoaming agent when it acts as a foam breaker by reducing the surface tension resulting in collapse of the foam bubbles.

Printing Ink :

Tarwax E finds application in printing ink manufacturing operation as lubricant and slip agent.