

LIPOWAX PA Pastilles

Emulsifying Wax NF in easy to use pastille form.

INCI Name: Emulsifying Wax NF.
Usage Rate: 2-10%

Definition

LIPOWAX PA is a preparation of higher fatty alcohols and represents an emulsifier of the self-bodying type. **LIPOWAX PA** produces thick, solid emulsions without the addition of stiffening waxes, even at concentrations as low as 5%, although 10% may provide superior stability. **LIPOWAX PA** emulsions show excellent stability in both acid and base media. Stable emulsions with a pH as low as 3 or as high as 13 can be produced. **LIPOWAX PA** is compatible with anionic, cationic and nonionic systems, making it a truly versatile product.

LIPOWAX PA differs significantly from older type self-emulsifying waxes, in that its oil-inwater emulsifying properties are not derived from the presence of auxiliary anionic surfactants of the soap (sulfonated oil or sulfated fatty alcohol type) or from alkalies, gums, etc. Unlike some emulsifying waxes, **LIPOWAX PA** does not deteriorate on heating, experiencing only a slight alteration in color at temperatures up to 150-152°C for two hours. Under these severe conditions, it may lose 2-3% in weight with slight hardening of the wax.

Description

LIPOWAX PA meets the standard for self emulsifying waxes monographed in the National Formulary. Emulsifying Wax NF is the premier nonionic self-emulsifying wax used in the cosmetic and pharmaceutical industries. It is a mild ingredient with a proven safety record and has been used successfully for many years. **LIPOWAX PA** possesses all the advantages of the older type emulsifying waxes, while lacking their disadvantages, such as the tendency for these materials to be incompatible or interfere with certain ingredients.

Functions

In cosmetic and pharmaceutical formulations, **LIPOWAX PA** has proven to be a desirable alternative to glyceryl monostearate, diglycol stearate, propylene glycol monostearate, self-emulsifying fatty alcohol blends and other wax-like emulsifiers. **LIPOWAX PA** yields emulsions of superior stability, elegance and efficacy when substituted directly for these emulsifiers (weight for weight). With smaller quantities of **LIPOWAX PA** (approximately 4/5ths), the system can be equally effective.

LIPOWAX PA can be used to produce viscous or thin emulsions, depending upon the concentration at which it is used. At low concentrations of 2-3%, **LIPOWAX PA** provides optimum emulsion stability supplemented with other emulsifiers.

LIPOWAX PA-based emulsions have advantages over carbomer stabilized emulsions and offer benefits in terms of the following:

- Emulsifier/thickener in one. Additional emulsifiers are seldom needed.
- No neutralization is needed in the formulation of creams and lotions.
- Compatible with cationic materials.
- Extremely tolerant of inorganic salts (unlike gums).
- No incidence of 'pilling'—a condition in which the natural salts present on the skin form small spheres as the product is being applied, making rub-in more difficult. Pilling often occurs with gum systems.
- Less soaping or whitening compared to gum-stabilized emulsions.

General Data

Shelf Life:	2 years when properly stored.
Storage:	Store in a cool, dry place in a tightly sealed container.

Specifications

APPEARANCE:	Pastille
COLOR:	Creamy White
ODOR:	Mild
PH:	5.5 - 7.0 (3% Aqueous Dispersion @ 25°C)
MELTING POINT:	48-52°C 48-52°C
SAP VALUE:	14.0 Max
HYDROXYL VALUE:	178-192
IODINE VALUE:	3.5 Max

Usage Guidelines

LIPOWAX PA emulsions can be prepared easily by incorporating **LIPOWAX PA** in the oil phase and then heating it and the water phase separately to 70-80°C. Once the two phases reach this temperature, the water phase is added to the oil phase in a thin stream using mechanical agitation. The emulsion is then stirred down to a temperature above the solidification point of the cream (to 30°C for a lotion). These emulsions are very stable, easy spreading systems, but can be homogenized if desired. A preservative should always be added to protect against bacterial growth.