



NatraMul™

All Natural Oil in Water Emulsifier
(patents pending)

Description:

Society today has increasing demands for green and natural products. This is exhibited in all types of consumer products, including personal care. NatraMul, a patent applied for NatraMul, was specifically designed as a cold-process (low energy) oil in water emulsifier for natural oils, delivered in powdered form, for cosmetic and personal care applications. Formulated with natural polysaccharides, pectin, extracted from the peels of citrus fruits, algin, derived from seaweed, and xanthan gum, and incorporating calcium ions, the constituents of the blend function synergistically to produce and stabilize emulsions of up to 25% oil in water. Using NatraMul as the sole emulsifier allows gentle formulations to be produced without the use of harsh surfactants. Simple lotions composed of 2.5% polymer blend and 20% natural oil in water have a smooth, creamy appearance, and exhibit a light, silky skin feel.

In addition to its functionality as an emulsifier, NatraMul can also be used as a thickener and gelling agent for water based systems.

Uses:

NatraMul is a multi-functional ingredient that can be utilized as an emulsifier, stabilizer and thickener in a variety of cosmetic applications including creams and lotions, foundations, gels, hair care formulations, and liquid soaps. As an emulsifier, a use level of 2-3% is recommended to incorporate up to 25% oil, depending on the specific formulation. NatraMul should first be added to the oil phase to make a slurry and then be added to the water phase with high speed mixing to emulsify at room temperature. In order to maintain pH stability, it is recommended to use a citric acid buffer system with NatraMul.

In water based systems, a use level of 1-4% is recommended, and NatraMul can be easily incorporated by dispersing in a water miscible ingredient, such as glycerin, prior to its addition to the water phase.

Nomenclature:

CAS: 9000-69-5, 9005-38-3, 11138-66-2, 471-34-1
INCI: Pectin, Algin, Xanthan Gum, Calcium Carbonate

Shelf Life: 2 years from date of manufacture.

Typical Properties:

These values are typical properties only and not necessarily specifications. Specifications and test methods are available upon request.

Form	Free flowing powder
Color	Cream
Viscosity 2% Solution (DV-II, spindle # 2 @ 10 rpm, 1 min.)	1200 cps
pH 2% Solution	6.5
Assay, Ca	1.82%

Testing:

NatraMul is characterized as having extremely low toxicity based on the principal components from which it is made. United-Guardian has not performed any animal testing on this material.

Derivation:

NatraMul is derived from raw materials of vegetable and mineral origin. No animal derived ingredients are present.

Storage and Handling:

Store in a cool, dry, ventilated area in a tightly closed container. Avoid contact with strong acids, alkalis or oxidizing agents. Avoid dust formation. As with any powder, sparks or flames may trigger a dust explosion.

Availability:

NatraMul is available in 5 gallon pails containing 25 pounds of net weight per pail.

Contact Guardian Laboratories for samples and sales information.