



Vanderbilt Minerals, LLC
A Wholly Owned Subsidiary of R.T. Vanderbilt Holding Company, Inc.

POCKET FORMULARY



N A T U R A L S M E C T I T E C L A Y S

Our Products

VANATURAL®

Bentonite Clay

VEEGUM®

Magnesium Aluminum Silicate

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Our Benefits

- Natural & Organic
- Stabilize Emulsions
- Stabilize Suspensions
- Modify Rheology
- Enhance Skin Feel
- And More!



NATURAL SMECTITE CLAYS



VANATURAL® Bentonite Clay and **VEEGUM**® Magnesium Aluminum Silicate are the industry standards for reliably stabilizing emulsions and suspensions. **VEEGUM** and **VANATURAL** products are natural smectite clays that have been water-washed to optimize purity and performance. Vanderbilt Minerals' diversified smectite reserves in the U.S. southwest are the foundation of our clay's reputation for uniformity and quality.



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PERSONAL CARE

APPLICATION GUIDE

Application	VEEGUM® Magnesium Aluminum Silicate								VANATURAL® Bentonite Clay			
	R	HV	K	HS	Pure	Ultra	EZ	D	Vanatural	MC	CA	XGB
Creams, Lotions, Suspensions; pH<6			X	X		X	X		X	X	X	X
Creams, Lotions, Suspensions; pH>6	X	X			X				X	X		X
Sunscreens						X	X			X	X	X
Color Cosmetics	X	X			X	X	X		X	X	X	X
Facial Masks				X		X	X		X	X	X	X
Antiperspirants		X		X								
Depilatories, Perms, Straighteners				X								
Shampoos				X		X	X				X	
Dentifrices		X						X	X	X		X
Natural Formulations	X	X	X	X	X	X	X	X	X	X	X	X
ECOCERT®/ COSMOS Authorized					X				X			X
Certified by The Vegan Society		X	X	X	X			X	X	X	X	X
USP/NF Pharmaceutical Grade	X	X	X	X	X							

FORMULATION BENEFITS

NATURAL SMECTITE CLAYS

Natural and Organic

VEEGUM® Magnesium Aluminum Silicate and **VANATURAL**® Bentonite Clay are natural smectite clay minerals used in a variety of personal care applications. These clays meet the definition of natural as defined by ISO 16128. **VANATURAL**, **VANATURAL XGB** and **VEEGUM Pure** clays are authorized by ECOCERT® Greenlife as complying with the ECOCERT and COSMOS standards for ecological and organic cosmetics. Most grades of **VEEGUM** and **VANATURAL** are certified by The Vegan Society.

Stabilize Emulsions

These natural clays stabilize emulsions at low concentrations. The smectite colloidal structure effectively keeps the internal phase droplets suspended and separated.

Stabilize Suspensions

The colloidal structure of these natural clays also provides excellent suspension of particles in aqueous systems. These clays offer better suspension efficiency than most organic gums at equal viscosity and will not form gelatinous, irreversible gels, as do some organic gums.

Modify Rheology

Shear-thinning products with controlled thixotropy can be formulated allowing rich emulsions to spread smoothly and suspensions and emulsions to freely pump or pour without losing stability.



FORMULATION BENEFITS

NATURAL SMECTITE CLAYS

Enhance Skin Feel

The platy nature of **VEEGUM®** and **VANATURAL®** contributes to spreadability and allows for the tack-free formulation of topical products. The tacky, gummy, or stringy nature of organic gums and polymers can be reduced or eliminated.

Work Synergistically with Organic Thickeners

In addition to their tactile benefits, **VEEGUM** and **VANATURAL** clays are often used with organic thickeners to enhance the best characteristics of each. The clays contribute synergistic viscosity and yield value.

Perform at High and Low pH

VEEGUM and **VANATURAL** clays are routinely used in products spanning the pH 2 to pH 13 range with certain grades particularly effective at pH extremes.

Resist Degradation

Because they are minerals, **VEEGUM** and **VANATURAL** clays are not decomposed by bacteria, heat, or excess mechanical shear.

For more information see
the **VEEGUM®/VANATURAL®**
for Personal Care and
Pharmaceuticals Brochure



VANATURAL® CA provides stability and contributes to the elegant skin feel of this cold processed mineral sunscreen cream. This formula has great spreadability without even a trace of whitening.



RICH & ELEGANT MINERAL SUNSCREEN CREAM NO. 667

Part	Product	INCI	%
A	Water	Water	53.90
	VANATURAL® CA Bentonite Clay	Bentonite	1.00
	VANZAN® NF Xanthan Gum	Xanthan Gum	0.50
	Glycerin	Glycerin	3.00
	Disodium EDTA	Disodium EDTA	0.10
	Citric Acid Solution (50% w/w)	Citric Acid (and) Water	2.00
B	SP NatraGem® E145 NP MBAL-LQ-(MV) ¹	Polyglyceryl-4 Laurate/Succinate (and) Water	2.46
	SpanTM 20-LQ-(AP) ¹	Sorbitan Laurate	3.04
	Ritamollient™ 3E ²	Trimethylolpropane Tricaprylate/Tricaprate	4.00
	Neobee® M-5 Cosmetic ³	Caprylic/Capric Triglyceride	2.00
	Zemea® Propanediol ⁴	Propanediol	3.00
C	Solaveil® CZ-300 MBAL-LQ-(WD) ¹	Zinc Oxide (and) Caprylic/Capric Triglyceride (and) Polyhydroxystearic Acid (and) Isostearic Acid	22.50
	Solaveil® CT-300 MBAL-LQ-(WD) ¹	Caprylic/Capric Triglyceride (and) Titanium Dioxide (and) Polyhydroxystearic Acid (and) Aluminum Stearate (and) Alumina	2.50
D	Preservative		q.s.

Procedure: Slowly add the **VANATURAL® CA** and **VANZAN® NF** sequentially or as a dry blend to the water while stirring with a propeller mixer. Mix until fully hydrated. Add the rest of Part A ingredients and mix well after each. Combine the Part B ingredients and mix until homogeneous on propeller mixer. Add the Part C ingredients to Part B with mixing and mix until homogeneous after each. Slowly add Parts B+C to Part A with stirring on a propeller mixer and mix thoroughly. Then, homogenize the batch for ten minutes. Cool if necessary to < 30°C, with mixing on a propeller mixer. Add Part D (preservative) with mixing and mix until homogeneous. Check and adjust (if necessary) to pH 6.5 – 7.5.

Suppliers: 1 Croda, Inc., Edison, NJ • 2 Rita Corporation, Crystal Lake, IL • 3 Stepan Company, Northfield, IL • 4 Premient Covation, Loudon, TN



The natural active in this lotion provides protection against pollution and blue light. **VANATURAL® CA** and **VANZAN® NF** work synergistically to produce an elegant skin feel and emulsion stability.

ENVIRONMENTAL AND BLUE LIGHT PROTECTION LOTION NO. 662

Part	Product	INCI	%
A	VANATURL® CA Bentonite Clay	Bentonite	2.50
	VANZAN® NF Xanthan Gum	Xanthan Gum	0.50
	Water	Water	79.00
	Tech-O® #6-090 L ¹	Avena Sativa (Oat) Kernel Extract (and) Glycerin (and) Phenoxyethanol	2.00
	Zemea® Propanediol ²	Propanediol	5.00
	Glucamate® SSE-20 Emulsifier ³	PEG-20 Methyl Glucose Sesquistearate	2.00
B	Glucate® SS Emulsifier ³	Methyl Glucose Sesquistearate	2.00
	Neobee® M-5 Cosmetic ⁴	Caprylic/Capric Triglyceride	2.00
	Covi-ox® T-50 C ⁵	Tocopherol	0.50
	TA-1618, Fatty Alcohol ⁶	Cetearyl Alcohol	2.50
C	Preservative		q.s.
	Citystem® ⁷	Glycerin (and) Marrubium Vulgare Extract	2.00
	Citric Acid, 20%	Citric Acid	q.s.

Procedure: While heating the water to 60-65°C, slowly add the **VANATURAL® CA** and **VANZAN® NF** sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Then, add the rest of the Part A ingredients and mix well after each. Maintain the water phase at 60-65°C. Combine the Part B ingredients (oil phase) and heat to 60-65°C. Add the oil phase to the water phase with good agitation; mix until uniform. Avoid incorporating air. Cool with mixing to <30°C, then add the preservative. Check the pH of the batch both prior to and after the incorporation of the Citystem. If necessary, adjust the pH to 5.0 (± 0.25) with citric acid, each time.

This luxuriously creamy facial scrub gently exfoliates leaving the skin feeling fresh, clean and smooth. **VANATURAL® XGB** ensures stability, suspending the natural cranberry seed exfoliant and maintaining formula viscosity.



CRANBERRY SEED FACE SCRUB CREAM NO. 600

Part	Product	INCI	%
A	VANATURAL® Bentonite Clay or VANATURAL MC	Bentonite	4.00
	VANZAN® NF Xanthan Gum	Xanthan Gum	1.00
	Water	Water	63.50
	Glycerin	Glycerin	2.00
B	Hydresia™ G2 ¹	Carthamus Tinctorius (Safflower) Oleosomes/Glycerin/Water	12.50
C	Plantaren® 2000 N UP ²	Decyl Glycocide	7.00
	Amphosol® CA ³	Cocamidopropyl Betaine	3.00
D	ESP Cranberry Seeds 20-40 ⁴	Vaccinium Macrocarpon (Cranberry) Seed	5.00
E	Ninol® 40-CO ³	Cocamide DEA	2.00
F	Preservative		q.s.

Procedure: Add the **VANATURAL®** and **VANZAN® NF** slowly to the water, sequentially or as a dry blend, agitating at high speed. Mix until smooth. Add the glycerin and mix until uniform. With slow speed/low shear prop mixing, add Part B and mix until uniform. Refer to the manufacturer's specific recommendations for incorporating oleosomes. With slow speed mixing, to avoid air incorporation, add Parts C, D, E and F in order, mixing until the batch is thickened and uniform.

This reconstitutable bentonite peel-off mask purifies and soothes. **VANATURAL®** provides a creamy texture and even application to facilitate peel-off.

BENTONITE INSTANT PEELABLE MASK NO. 665

Part	Product	INCI	%
A	VANATURAL® Bentonite Clay or VANATURAL MC	Bentonite	5.00
	COLOR CLAY VULCANUSTM ¹	Kaolin Clay	5.00
	VANZAN® NF Xanthan Gum	Xanthan Gum	0.50
	Matalgin™ PLF ²	Diatomaceous Earth (and) Algin (and) Calcium Sulfate (and) Tetrasodium Pyrophosphate	35.00
	Texturlux® Stabil ³	Hydrolyzed Corn Starch Hydroxyethyl Ether	20.00
	Irish Moss 4:1, PE ⁴	Gum Arabic (and) Maltodextrin (and) Chondrus crispus (Irish Moss) Extract (and) Silicon Dioxide	5.00
	Tapioca Pure™ Starch ⁵	Tapioca Starch	24.50
	Jordapon® SCI Powder ⁶	Sodium Cocoyl Isethionate	5.00

Procedure: Add in each ingredient separately and mix in thoroughly after each.

Directions for Use: Transfer a small amount of the powder to a separate container. While slowly adding water dropwise, stir to form a paste of an easily spreadable consistency. Apply an even layer of the mask to the face and allow it to dry for ten minutes. These two steps are very important factors for the best results with this formula 1.) application of the paste in a uniform film thickness with good coverage and 2.) control of the drying time. Also, it is important to note that the film will not be completely dry at the 10-minute mark. Once dried for ten minutes, immediately lift the film from the edge and peel away from the face. Wash off any residual dried mask with a soft cloth and warm water. Dispose of any unused paste.

Suppliers: 1 COLOR CLAY, S.L., El Papiol, Spain • 2 Alliance Gums & Industries, Cormeilles en Parisis, France • 3 Tate & Lyle, Decatur, IL • 4 Bio-Botanica, Inc., Hauppauge, NY • 5 Nouryon, Amsterdam, Netherlands • 6 BASF Corp., Florham Park, NJ



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*As Specified On Page 1



**COSMOS
APPROVED**



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