VEEGUM[®] Magnesium Aluminum Silicate VAN GEL[®] Magnesium Aluminum Silicate VANATURAL[®] Bentonite Clay VANZAN[®] Xanthan Gum

Personal Care & Household WIPES



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VEEGUM, **VANATURAL** and **VAN GEL** clays, and **VANZAN** Xanthan Gum are recommended for the development of personal care and household cleaning "wipes". More specifically, these rheology modifiers and formula stabilizers can impart viscosity to an aqueous formula prepared for coating or impregnation onto a wipe sheet or can prevent the separation of a formula as it sits in the hopper prior to sheet application.

Product information:

VEEGUM, **VANATURAL** and **VAN GEL** water-washed natural smectite clays have a long history of use in aqueous liquids as rheology modifiers and as suspension and emulsion stabilizers.

The **VEEGUM** line of smectite clays contains grades suitable for thickening and emulsion stabilization in cosmetic, personal care and pharmaceutical applications.

VANATURAL bentonite and VANATURAL XGB bentonite/

xanthan gum blend are rapid-hydrating products that provide rheology modification and product stabilization as

well as being suitable for use in products formulated for the organic personal care market. **VANATURAL** and **VANATURAL XGB** are listed with ECOCERT Greenlife[™]/COSMOS[™].

The **VAN GEL** line of smectite clays is suitable for industrial applications. These clays are produced using the same water-washing process as cosmetic and pharmaceutical grade **VEEGUM** and **VANATURAL** products.

VANZAN xanthan gums are efficient thickeners as well as emulsion and suspension stabilizers. They also provide useful synergism with **VEEGUM**, **VAN GEL** and **VANATURAL** clays.

Note: These products do not lend themselves to "wicking"; formulators of those types of wipes would not likely choose to incorporate these products into formulas applied by wicking.

Usage information:

Prior to application by spraying or rolling, formulas are held in hopper tanks, or if the wipe sheets are dipped, the formula is held in tanks or "boxes". Unless used immediately, these formulas can experience separation, settling or creaming. **VEEGUM**, **VAN GEL**, **VANATURAL** and **VANZAN** products have a long history of keeping unstable formulas homogeneous. These products are used as stabilizers so that a smooth, even, consistent application is made to the wipe sheets.

The appropriate clay, gum or combination of clay and gum will allow fine-tuning of viscosity for optimized impregnant application onto wipe sheets. Once the formula is applied to the sheet, these products will help to retain moisture and enhance the aesthetic feel of the product.

Using VANATURAL[®], VEEGUM[®] and VAN GEL[®] Clays:

VEEGUM Magnesium Aluminum Silicate, **VAN GEL** Magnesium Aluminum Silicate, **VANATURAL** Bentonite Clay products must be properly dispersed in water to provide their best performance. No other materials should be present in the water, because they can interfere with proper clay hydration and colloidal structure formation. The degree of clay hydration is directly proportional to the amount of energy used to disperse the

product. The degree of hydration therefore increases as mixing time, mixing intensity or water temperature increase. **VANATURAL XGB** and **VEEGUM Ultra** are fast-hydrating products, requiring relatively little energy input; adequate hydration can be achieved quickly in heated or unheated water and with low or high shear mixing.



Using VANZAN® Xanthan Gum:

Trademarks:

VANZAN products are soluble in both cold and warm water. To dissolve quickly and completely, they must first be properly dispersed so that individual gum particles are surrounded by the aqueous medium. The individual particles then hydrate and dissolve. Good dispersion is promoted by high shear mixing, blending the gum particles into a water-miscible non-solvent such as glycol or alcohol before addition to the aqueous phase, or dry blending with other dry ingredients before addition to the aqueous phase.

The formulas on the following pages are recommended starting points for compositions for spray or roller application to wipes sheets.

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Blue Light & Pollution Protection Lotion for Wipes No. 640

Α	VEEGUM [®] Ultra Magnesium Aluminum Silicate VANZAN [®] NF Xanthan Gum Water Avena Sativa (Oat) Kernel Extract (and) Glycerin (and) Phenoxyethanol (Tech-O [®] #6-090 L ¹) Propanediol (Zemea [®] Propanediol ²) PEG-20 Methyl Glucose Sesquistearate (Glucamate [®] SSE-20 Emulsifier ³)	2.00 0.50 82.00 2.00 5.00 1.00
В	Methyl Glucose Sesquistearate (Glucate [®] SS Emulsifier ³) Caprylic/Capric Triglyceride (Neobee [®] M-5 ⁴) Tocopherol (Covi-ox [®] T-50 C ⁵) Cetearyl Alcohol (TA-1618, Fatty Alcohol ⁶)	1.00 2.00 0.50 2.00
С	Preservative Glycerin (and) Marrubium Vulgare Extract (Citystem ^{®7}) Citric Acid, 20%	q.s. 2.00 q.s.

Procedure: While heating the water to 60-65°C, slowly add the **VEEGUM**[®] *Ultra* 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 the citric acid, each time.

RAW MATERIAL SUPPLIERS	TRADEMARKS
¹ Beacon CMP Corporation, Kenilworth, NJ	VEEGUM and VANZAN are registered trademarks of Vanderbilt Minerals, LLC.
² DuPont Tate & Lyle Bio Products Company, LLC,	Citystem is a registered trademark of Sederma SAS France.
Wilmington, DE	Covi-ox is a registered trademark of Cognis Corporation.
³ Lubrizol Advanced Materials, Inc., Cleveland, OH	Glucamate and Glucate are registered trademarks of Lubrizol Advanced Materials, Inc.
⁴ Stepan Company, Northfield, IL	Neobee is a registered trademark of Stepan Company.
⁵ BASF Corporation, Florham Park, NJ	Tech-O is a registered trademark of Beacon CMP Corporation.
⁶ Peter Cremer, Cincinnati, OH	Zemea is a registered trademark of DuPont Tate & Lyle Bio Products Company, LLC.
⁷ Croda, Inc., Edison, NJ	
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Vitamin-Enriched Skin Cream with Natural Moisturizers No. 545

A	VEEGUM [®] R Magnesium Aluminum Silicate VANZAN [®] NF Xanthan Gum Water	Wt.% 1.00 0.25 79.75
В	Butylene Glycol Disodium EDTA D-Panthenol USP	5.00 0.20 0.20
С	Macadamia Ternifolia Nut Oil (Australian Macadamia Nut Oil – Cosmetic Grade ¹) Polyglyceryl-3 Distearate (Cremophor [®] GS32 ²) Ceteareth-25 (Cremophor [®] A25 ²) Cetearyl Alcohol Tocopherol Acetate (Vitamin E Acetate Oil USP, FCC ²)	4.50 3.00 1.50 3.00 0.50
D	Retinyl Palmitate (Vitamin A Palmitate ²)	0.10
Е	Hyaluronic Acid (and) Water (Lipo Hyaluronic Acid 1% Solution) ³ Preservative	1.00 q.s.

Procedure: While heating the water to 60-65°C, slowly add the **VEEGUM®** R and **VANZAN®** NF sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Add Part B and mix until uniform. Maintain the water phase at 60-65°C. Blend the Part C oil phase ingredients and heat to 60-65°C. Add Part C to Part A/B with good agitation. Cool with mixing. At 40-45°C add Part D. At 30°C add Part E. Adjust as necessary to pH 6.5 ± 0.5.

RAW MATERIAL SUPPLIERS

¹Southern Cross Botanicals PTY Ltd, Lennox Head, NSW, Australia ²BASF Corporation, Florham Park, NJ ³Vantage Specialty Ingredients (formerly Lipo Chemicals), Warren, NJ

TRADEMARKS

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Natural Moisturizing Lotion No. 601

Α	VANATURAL [®] XGB Bentonite Clay Water	Wt.% 5.0 77.5
в	Carthamus Tinctorius (Safflower) Oleosomes/Glycerin/Water (Hydresia [®] G2 ¹) Crambe Abyssinica Seed Oil (Fancor [®] Abyssinian Oil ²)	12.5 5.0
С	Preservative	q.s.

Procedure: Add the **VANATURAL**[®] **XGB** slowly to the water agitated at high speed. Mix until smooth. Combine and mix Part B ingredients with slow speed/low shear prop mixing until uniform. Refer to the manufacturer's specific recommendations for incorporating oleosomes. Slowly add Part B to Part A with slow to moderate speed mixing until emulsified. Add Part C and mix at slow to moderate speed until uniform.

RAW MATERIAL SUPPLIERS ¹Botaneco, Inc., Bensalem, PA ²Elementis Specialties, Hightstown, NJ

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Non-Silicone Furniture Polish No. 579

		Wt.%
	VAN GEL [®] B Magnesium Aluminum Silicate	0.50
Α	VANZAN [®] Xanthan Gum	0.40
	Water	73.15
-	Beeswax Emulsion (Kahl Emulsion BE 7201)	10.00
в	Carnauba Wax Emulsion, 40%	10.00
С	Emulsifing Agent (PLURONIC [®] L44 ²)	0.35
	Orange Oil (Tech Grade d-limonene ³)	5.00
D	Preservative	q.s.

Procedure:

Step 1 – Blend the **VAN GEL**[®] **B** and **VANZAN**[®] and sift into an established vortex in the water. Mix at maximum available shear until fully hydrated.

Step 2 – Add the Part B, C and D ingredients in order, mixing after each addition until uniform. Avoid air entrapment.

RAW MATERIAL SUPPLIERS

¹DeWolf Chemical, Inc., East Providence, RI ²BASF Performance Chemicals, Mount Olive, NJ ³Florida Chemical, Winter Haven, FL

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