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VANDERBILT

Formulary

Over-The-Counter (OTC) and Personal Care Formulary No. 927



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OVER-THE-COUNTER (OTC) & PERSONAL CARE FORMULARY

VANATURAL[®] Bentonite Clay

VEEGUM[®] Magnesium Aluminum Silicate

VANZAN[®] Xanthan Gum

VANATURAL Bentonite Clay (INCI Name: Bentonite) and **VEEGUM** Magnesium Aluminum Silicate (INCI Name: Magnesium Aluminum Silicate) are natural water-washed smectite clays that reliably stabilize personal care and pharmaceutical emulsions and suspensions.

VANZAN (INCI Name: Xanthan Gum) is a natural, high molecular weight, exocellular polysaccharide derived from *Xanthomonas campestris*. Because of its protective function in nature, it is more resistant than most gums to shear, heat, bacterial, enzyme, and UV degradation. **VANZAN** products are efficient thickeners as well as emulsion and suspension stabilizers. They also provide useful synergism with **VANATURAL** and **VEEGUM** clays.

USING VANATURAL AND VEEGUM CLAYS

VANATURAL and **VEEGUM** 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. One grade, **VEEGUM Ultra**, is relatively unaffected by changes in these mixing factors; adequate hydration can be achieved quickly, using room temperature water and a simple, slow-speed propeller mixer.

The following table provides guidelines for the minimum amounts of time suggested for the hydration of **VANATURAL** and **VEEGUM** products. Actual hydration times, in the laboratory or in production, will depend on the particular combination of batch size, mixer shear, and water temperature used. Whichever mixing conditions are used, it is very important that they be carefully controlled to achieve reproducible results in the final formulation.

Water Temp.	Mixer Type	Mixer Speed rpm	Minimum Suggested Mixing Time		
			VEEGUM VEEGUM K	VANATURAL VEEGUM HS	VEEGUM Ultra
25°C	Propeller	800	120 min.	30 min.	15 min.
75°C	Propeller	800	45 min.	20 min.	10 min.
25°C	Homogenizer	3000	30 min.	20 min.	10 min.
75°C	Homogenizer	3000	15 min.	10 min.	10 min.

USING VANZAN XANTHAN GUM

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 a glycol or alcohol before addition to the aqueous phase, dry blending with other formula ingredients, such as co-thickeners, salts, acids, abrasives or pigments before addition to the aqueous phase.

RECOMMENDED GRADES FOR SKIN AND HAIR CARE

Smectite Clays:

VANATURAL	Rapidly hydrating high purity bentonite clay for most personal care applications.
VEEGUM Ultra	A unique acidic smectite clay that is especially easy to hydrate.
VEEGUM	The standard grade for a wide range of applications; Magnesium Aluminum Silicate NF Type IA
VEEGUM HV	The highest viscosity pharmaceutical grade; Magnesium Aluminum Silicate NF Type IC
VEEGUM K	A low acid demand, high electrolyte stability grade; Magnesium Aluminum Silicate NF Type IIA
VEEGUM HS	The highest stability to electrolytes and pH extremes; Purified Bentonite NF

Xanthan Gum:

VANZAN NF	The standard grade for most personal care and pharmaceutical applications; Xanthan Gum NF
VANZAN NF-C	Produces clear solutions; used when product clarity is essential; Xanthan Gum NF

TREATMENT & GROOMING

Bismuth Subsalicylate Suspension No. 596

	wt. %
A	VEEGUM HS Magnesium Aluminum Silicate 1.6
	VANZAN NF Xanthan Gum 0.4
	Water 94.2
B	Sodium Salicylate 0.1
	Sorbic Acid 0.1
	Sodium Saccharin 0.2
	Bismuth Subsalicylate SG ¹ 3.4

¹MCP Metalspecialties, Fairfield, CT / MCP HEK Gmbh, Lubeck, Germany

Procedure: Slowly add the VEEGUM HS and VANZAN NF sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Add Part B ingredients in order, mixing after each addition until uniform. Mix suspension slowly as necessary to de-aerate before packaging.

Antacid Formulation No. 445 (rev.)

	wt. %
A	VEEGUM [®] HS Magnesium Aluminum Silicate 0.25
	VANZAN [®] NF Xanthan Gum 0.28
	Water 61.69
B	Methylparaben 0.10
	Propylparaben 0.05
C	Sorbitol, 70% 14.30
D	Barcroft [™] Aluminum Hydroxide GEL LV 13 11.33
	USP ¹ , 20% Al(OH) ₃
	Barcroft [™] Magnesium Hydroxide Paste USP ¹ , 30% Mg(OH) ₂ 12.00

¹SPI Pharma Group, New Castle, DE

Procedure: Slowly add the VEEGUM HS and VANZAN NF sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Add Parts B, C and D in order, mixing after each addition until uniform.

Antacid Formulation No. 570

	wt. %
A	VEEGUM [®] HV Magnesium Aluminum Silicate 1.25
	Water 60.97
B	Methylparaben 0.10
	Propylparaben 0.05
C	Sorbitol, 70% 14.30
D	Barcroft [™] Aluminum Hydroxide GEL LV 13 11.33
	USP ¹ , 20% Al(OH) ₃
	Barcroft [™] Magnesium Hydroxide Paste USP ¹ , 30% Mg(OH) ₂ 12.00

¹SPI Pharma Group, New Castle, DE

Procedure: Slowly add the VEEGUM HV to the water agitated at maximum available shear. Mix until fully hydrated. Add Parts B, C and D in order, mixing after each addition until uniform

Unit Dose Bismuth Subsalicylate Powder No. 597

	wt. %
VEEGUM F Magnesium Aluminum Silicate	67.90
Bismuth Subsalicylate SG ¹	13.10
D-Glucose Monohydrate	18.73
Sodium Saccharin	0.17
Vanillin	0.10

¹MCP Metalspecialties, Fairfield, CT / MCP HEK Gmbh, Lubeck, Germany

Procedure: Blend the powders thoroughly. Package as 4.0 g unit doses.

Use: Vigorously stir 4.0 g of powder into 4 oz. of water and drink immediately. A 4.0 g dose provides 524 mg of bismuth subsalicylate.

Hydrocortisone Acetate Cream No. 366

	wt. %
A	VEEGUM [®] K Magnesium Aluminum Silicate 1.50
	Water 66.49
	Citric Acid 0.01
	Polysorbate 80 (Tween [®] 80 ¹) 0.50
	Hydrocortisone Acetate 0.50
B	C12-15 Alkyl Benzoate (Finsolv [®] TN ²) 10.00
	Hydrogenated Polyisobutylene (Parleam [®] 3 ³) 5.00
	C ₁₈ -C ₃₆ Acid (Syncrowax [™] AW1-C ⁴) 4.00
	Glyceryl Stearate (and) PEG-100 Stearate (Arlacel [®] 165 ¹) 12.00
C	Preservative q.s.

¹Uniqema, New Castle, DE

²Innospec Active Chemicals, Edison, NJ

³Rosow Cosmetics-USA, Laurel, NY

⁴Croda, Inc., Edison, NJ

Procedure: While heating the water to 75-80°C, slowly add the VEEGUM K to the water agitated at maximum available shear. Mix until fully hydrated. Add the remaining Part A ingredients and mix until uniform. Maintain the water phase at 75-80°C. Blend the Part B oil phase ingredients and heat to 75-80°C. Add Part B to Part A with good agitation. Cool with mixing; add the preservative when the emulsion is <40°C.

Benzocaine Cream No. 360

	wt. %
A	VEEGUM [®] Magnesium Aluminum Silicate 1.5
	Water 56.8
	Propylene Glycol 3.0
	10% Silicone Emulsion (FG-10 Antifoam Emulsion ¹) 0.2
B	Mineral Oil, Light 10.0
	Acetylated Lanolin Alcohol (Acetulan ²) 7.0
	Menthol, USP 1.0
	Benzocaine, USP 5.0
	Polysorbate 60 (Tween [®] 60 ³) 0.5
	C ₁₈ -C ₃₆ Acid (Syncrowax [™] AW1-C ⁴) 3.0
	Glyceryl Stearate (and) PEG-100 Stearate (Arlacel [®] 165 ³) 12.0
C	Preservative q.s.

¹Dow Corning Corporation, Midland, MI

²Lubrizol Advanced Materials, Inc., Cleveland, OH

³Uniqema, New Castle, DE

⁴Croda, Inc., Edison, NJ

Procedure: While heating the water to 75-80°C, slowly add the VEEGUM to the water agitated at maximum available shear. Mix until fully hydrated. Add the remaining Part A ingredients and mix until uniform. Maintain the water phase at 75-80°C. Blend the Part B oil phase ingredients and heat to 75-80°C, keeping the benzocaine suspended. Add Part B to Part A with good agitation. Cool with mixing; add the preservative when the emulsion is <40°C.

Instant Sulfur Acne Treatment Mask No. 590

	wt. %
VEEGUM [®] HS Magnesium Aluminum Silicate	5
Kaolin USP	60
Sodium Bicarbonate	25
Avena Sativa (Oat) Kernel Flour (Tech-O [®] #11-070 Oat Flour ¹)	5
Precipitated Sulfur USP	5

¹Beacon CMP Corp., Kenilworth, NJ

Procedure: Dry blend all ingredients.

Use: By volume, mix about 1 part water or witch hazel into 4.5 parts of poultice powder and mix to form a smooth paste.

Botanical Skin Lightening Lotion No. 492

	wt. %
A VEEGUM [®] <i>Ultra</i> , Magnesium Aluminum Silicate	2.0
Water	69.8
Carbomer (Carbopol [®] 934 ¹)	0.2
B Polysorbate 20 (Tween [®] 20 ²)	0.6
Glycerin	3.0
Butylene Glycol	3.0
Cetyl Alcohol	0.5
Isororbide Laurate (Arlamol [®] ISML ³)	1.0
Laureth-23 (Brij [®] 35 ²)	0.7
Steareth-2 (Brij [®] 72 ²)	1.1
C Steareth-21 (Brij [®] 721 ²)	1.1
Caprylic/Capric Triglyceride (Neobee [®] M-5 ³)	5.0
Glyceryl Monostearate SE (Dermalcare [®] GMS SE ⁴)	3.0
C ₁₂₋₁₅ Octanoate (Finester [™] EH-25 ⁵)	3.0
Dimethicone (DC 200 Fluid, 350 cSt ⁶)	1.0
Triethanolamine (pH to 6.0 ± 0.5)	3.0
Saxifraga Sarmentosa Extract (and) Grape Extract (and)	2.0
D Butylene Glycol (and) Water (and) Mulberry Root	
Extract (and) Scutellaria Baicalensis Extract (and) Na ₂	
EDTA (Biowhite [™] 7)	
E Preservative, Chelating Agent	q.s.

¹Lubrizol Advanced Materials, Inc., Cleveland, OH

²Uniqema, New Castle, DE

³Stepan Company, Northfield, IL

⁴Rhodia Inc., Cranbury, NJ

⁵Innospec Active Chemicals, Edison, NJ

⁶Dow Corning Corporation, Midland, MI

⁷BASF Corporation, Florham Park, NJ

Procedure: Begin heating the water to 75-80°C. Slowly add the **VEEGUM Ultra** and Carbopol 934 sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Add the water phase ingredients from Part B, mixing until uniform. Maintain the water phase at 75-80°C. Blend the Part C oil phase ingredients and heat to 75-80°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool while mixing; when the emulsion is <45°C add the Part D and Part E ingredients in the order listed, mixing after each addition until smooth and uniform. Adjust as necessary to pH 6.0±0.5.

5% Benzoyl Peroxide Acne Treatment Lotion No. 356

	wt. %
A VEEGUM [®] Magnesium Aluminum Silicate	0.90
VANZAN [®] NF Xanthan Gum	0.40
Water	75.55
B Propylene Glycol	6.00
Benzoyl Peroxide, 70% Powder	7.15
C Laureth-4 (Brij [®] L4 ¹)	5.00
Acetylated Lanolin Alcohol (Acetulan ²)	5.00
D Preservative	q.s.

¹Uniqema, Wilmington, DE

²Lubrizol Advanced Materials, Inc., Cleveland, OH

Procedure: Slowly add the **VEEGUM** and **VANZAN NF** sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Mill Part B to a smooth paste. Blend Part B with Part C. Add this blend to Part A and mix until uniform.

AHA Treatment Cream No. 484

	wt. %
A VEEGUM [®] <i>Ultra</i> , Magnesium Aluminum Silicate	1.5
VANZAN [®] NF, Xanthan Gum	0.3
Deionized Water	56.6
B Glycerin	3.4
Butylene Glycol	2.0
Cetyl Alcohol	0.5
Glyceryl Monostearate SE (Dermalcare [®] GMS SE ¹)	3.0
Petrolatum	10.0
Mineral Oil	2.0
C Caprylic/Capric Triglyceride (Neobee [®] M-5 ²)	3.0
C ₁₂₋₁₅ Octanoate (Finester [®] EH-25 ³)	2.0
Dimethicone (DC 200 Fluid, 350 cSt ⁴)	1.0
Steareth-2 (Brij [®] 72 ⁵)	1.5
Steareth-21 (Brij [®] 721 ⁵)	1.5
Isororbide Laurate (Arlamol [®] ISML ⁵)	0.5
Lactic Acid USP, 88 %	2.6
D Sodium Lactate (PATLAC NAL ⁶)	2.6
Glycolic Acid, 70 %	3.0
Triethanolamine (to pH 3.75 ± 0.25)	3.0
E Preservative	q.s.

¹Rhodia, Cranbury, NJ

²Stepan Company, Northfield, IL

³Innospec Active Chemicals, Edison, NJ

⁴Dow Corning Corporation, Midland, MI

⁵Uniqema, New Castle, DE

⁶RITA Corporation, Crystal Lake, IL

Procedure: While heating the water to 75-80°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. Add the remaining water phase ingredients from Part B, mixing until uniform. Maintain the water phase at 75-80°C. Blend the Part C oil phase ingredients and heat to 75-80°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool while mixing. Add the Part D and Part E ingredients when the emulsion is <40°C. Adjust as necessary to pH 3.75 ± 0.25.

Antifungal Cream No. 355

	wt. %
VEEGUM [®] Magnesium Aluminum Silicate	0.75
Water	48.75
Sorbitol, 70% Solution	10.00
A Polysorbate 80 (Tween [®] 80 ¹)	1.00
Zinc Undecylenate	20.00
Caprylic Acid	5.00
C12-15 Alkyl Benzoate (Finsolv [®] TN ²)	3.00
B Polysorbate 80 (Tween [®] 80 ¹)	1.50
C ₁₈ -C ₃₆ Acid (Syncrowax [™] AW1-C ³)	2.00
Glyceryl Stearate (and) PEG-100 Stearate (Arlacel [®] 165 ¹)	8.00
C Preservative	q.s.

¹Uniqema, New Castle, DE²Innospec Active Chemicals, Edison, NJ³Croda, Inc., Edison, NJ

Procedure: While heating the water to 70-75°C, slowly add the **VEEGUM** to the water agitated at maximum available shear. Mix until fully hydrated. Add the remaining Part A ingredients and mix until uniform. Maintain the water phase at 70-75°C. Blend the Part B oil phase ingredients and heat to 70-75°C. Add Part B to Part A with good agitation. Cool with mixing; add the preservative when the emulsion is <40°C.

Mosquito Repellent Cream No. 457

	wt. %
VEEGUM [®] Ultra Magnesium Aluminum Silicate	0.40
A Carbomer (Carbopol [®] 940 ¹)	0.40
Water	79.2
B N,N-Diethyl-m-Toluamide	15.0
Glyceryl Stearate (and) PEG-100 Stearate (Arlacel [®] 165 ²)	5.0
C Sodium Hydroxide solution to pH 5.5	q.s.
D Preservative	q.s.

¹Lubrizol Advanced Materials, Inc., Cleveland, OH²Uniqema, New Castle, DE

Procedure: Begin heating the water to 50-55°C. Slowly add the **VEEGUM Ultra** and Carbopol 940 sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Maintain Part A at 50-55°C. Heat Part B to 50-55°C. Add Part A to Part B with good agitation. Cool with mixing; add the sodium hydroxide and preservative when the emulsion is <35°C.

Calamine Lotion No. 361

	wt. %
VEEGUM [®] Magnesium Aluminum Silicate	0.8
A VANZAN [®] NF Xanthan Gum	0.2
Water	79.6
B Propylene Glycol	3.0
Polysorbate 80	0.4
C Calamine (Prepared), USP	8.0
Zinc Oxide, USP	8.0
D Preservative	q.s.

Procedure: Slowly add the **VEEGUM** 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 slowly until uniform. Add Part C slowly and mix until uniform. Add Part D slowly and mix until uniform.

Zinc Pyrithione Lotion Shampoo No. 364

	wt. %
VEEGUM Magnesium Aluminum Silicate	0.5
A Water	51.1
Hydroxypropyl Guar (Jaguar HP-60 ¹)	0.5
Ammonium Lauryl Sulfate (Rhodapon [™] L-22 ¹)	40.0
B PPG-5-Ceteth-10 Phosphate (Crodafos [™] SG ²)	1.8
Lauramide DEA (Monamid [®] 716 ²)	4.0
C Zinc Pyrithione, 48% (Zinc Omadine ³)	2.1
Preservative	q.s.

¹Rhodia Inc., Cranbury, NJ²Croda, Inc., Edison, NJ³Arch Personal Care Products L.P., South Plainfield, NJ

Procedure: Slowly add the **VEEGUM** to the water agitated at maximum available shear. Mix until fully hydrated. Add the hydroxypropyl guar and mix until uniformly dispersed. With slow stirring add the Part B ingredients in order. Add the phosphate slowly, mixing until the guar gum is totally dissolved. Add the Part C ingredients in the order listed, agitating slowly. Mix until smooth and uniform. Avoid incorporation of air. Adjust as necessary to pH 7.2.

External Analgesic Cream No. 369

	wt. %
VEEGUM [®] Magnesium Aluminum Silicate	1.5
A Water	54.7
FG-10 Antifoam ¹	0.2
Propylene Glycol	3.0
Methyl Salicylate	15.0
B Menthol	5.0
Polysorbate 80 (Tween [®] 80 ²)	0.6
C ₁₈ -C ₃₆ Acid (Syncrowax [™] AW1-C ³)	5.0
Glyceryl Stearate (and) PEG-100 Stearate (Arlacel [®] 165 ²)	15.0
C Preservative	q.s.

¹Dow Corning Corporation, Midland, MI²Uniqema, New Castle, DE³Croda, Inc., Edison, NJ

Procedure: While heating the water to 75-80°C, slowly add the **VEEGUM** to the water agitated at maximum available shear. Mix until fully hydrated. Add the remaining Part A ingredients and mix until uniform. Maintain the water phase at 75- 80°C. Blend the Part B oil phase ingredients and heat to 75-80°C. Add Part B to Part A with good agitation. Cool with mixing; add the preservative when the emulsion is <40°C.

AHA Clay Mask No. 487

	wt. %
VEEGUM [®] Ultra , Magnesium Aluminum Silicate	5.0
A Water	38.9
Glycerin	5.0
Butylene Glycol	3.0
Cosmetic Kaolin clay	30.0
Cosmetic Talc	5.0
B Sodium Lauroyl Sarcosinate, 30%	5.0
Glycolic Acid, 70%	5.0
d-Panthenol	0.5
Vitamin E Acetate	0.1
Vitamin A Palmitate	0.1
Triethanolamine	2.4
C Preservative	q.s.

Procedure: Slowly add the **VEEGUM Ultra** to the water agitated at maximum available shear. Mix until fully hydrated. Add the Part B ingredients in order, mixing after each addition until smooth.

Extra-Strength Roll-On Antiperspirant No. 443

		wt. %
A	VEEGUM® HV Magnesium Aluminum Silicate	1.0
	Water	29.0
B	Glyceryl Stearate (and) PEG-100 Stearate (Arlacel® 165 ¹)	8.0
C	Aluminum Zirconium Tetrachlorohydrate GLY, 30% solution	33.0
	Aluminum Chloride, 32° Baume solution	5.5
	Aluminum Chlorhydrate, 50% solution	16.5
D	Cyclomethicone (Dow Corning® ST-Cyclomethicone-5 NF ²)	7.0
E	Preservative	q.s.

¹Uniqema, New Castle, DE²Dow Corning Corporation, Midland, MI

Procedure: While heating the water to 75°C, slowly add the **VEEGUM HV** to the water agitated at maximum available shear. Mix until fully hydrated. Heat Part B to 75°C. Heat Part C to 50-55°C. Add Part B to Part A with good agitation. Cool with mixing to 50°C and add Part C. Cool with mixing to 25°C and add Part D with good agitation. Add Part E and mix until uniform.

Soft-Gel Toothpaste No. 562

		wt. %
A	VEEGUM® D Magnesium Aluminum Silicate	1.00
	Water	39.71
	Tetrasodium Pyrophosphate (Food Grade)	1.00
	VANZAN® NF Xanthan Gum	0.50
B	Methyl Paraben NF	0.20
	Propyl Paraben NF	0.05
	Sorbitol, 70%	10.00
	Glycerin, 99.7% USP	10.00
	Hydrated Silica (Zeodent® 113 ¹)	30.00
	Saccharin	0.20
C	Water	5.60
	Sodium Fluoride	0.24
D	Sodium Lauryl Sulfate, 29% (Rhodapon™ LSB ²) FD & C Blue 1	1.50 q.s.

¹J.M Huber Corporation, Havre de Grace, MD²Rhodia, Cranbury, NJ

Procedure: Sift the **VEEGUM D** into an established vortex in the and mix until dispersed. Add the TSPP and mix until dissolved. Sift in the **VANZAN NF** and mix at maximum available shear until the **VEEGUM D** is fully hydrated and the **VANZAN NF** is dissolved. Add the Part B ingredients in the order shown, mixing thoroughly after each addition. In Part C, dissolve the sodium fluoride in the water and then add to the batch. Add the sodium lauryl sulfate with very slow mixing to avoid air entrapment. Add the colorant and mix thoroughly.

Stay Dry W/O Antiperspirant Stick No. 341

		wt. %
A	VEEGUM® HV Magnesium Aluminum Silicate	1.0
	Water	20.0
	Aluminum Chlorhydrate, impalpable	18.0
B	Cyclomethicone (Dow Corning® ST-Cyclomethicone-5 NF ¹)	26.0
	Isopropyl Myristate	5.0
	Stearyl Alcohol	24.0
	Sorbitan Trioleate (Span® 85 ²)	5.0
	Polysorbate 85 (Tween® 85 ²)	1.0
C	Preservative	q.s.

¹Dow Corning Corporation, Midland, MI²Uniqema, New Castle, DE

Procedure: While heating the water to 65-70°C, slowly add the **VEEGUM HV** to the water agitated at maximum available shear. Mix until fully hydrated. Add the aluminum chlorhydrate and mix until uniform, maintaining to 65-70°C. Heat Part B to 65-70°C. Add Part A to Part B with good agitation. Cool with mixing to 50-55°C. Add Part C and pour into molds to cool.

CLEANSING**Sulfur and Salicylic Acid Acne Treatment Wash No. 583**

		wt. %
A	VEEGUM® HS Magnesium Aluminum Silicate	2.0
	VANZAN® NF Xanthan Gum	0.50
	Water	76.75
B	Sucrose Stearate (Surfhope® SE Cosme C-1811 ¹)	1.25
	Cetyl Alcohol	1.0
C	Glycerin	4.0
	Sulfur (Yellow Jacket® Wettable Sulfur II ²)	2.0
	Sodium Laureth Sulfate	10.0
D	Salicylic Acid, USP	2.0
	Preservative	q.s.
	Sodium Hydroxide, 50%	q.s.

¹Arch Personal Care Products L.P., South Plainfield, NJ²Georgia Gulf Sulfur Corp., Valdosta, Georgia

Procedure: While heating the water to 65°C, slowly add the **VEEGUM HS** and **VANZAN NF** sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Maintaining temperature at 65°C, add Part B ingredients in order, mixing after each addition until uniform. Cool with stirring to ambient temperature. Slowly add the part C and Part D ingredients in the order listed, mixing after each addition until uniform. Avoid the incorporation of air. Adjust to approximately pH 4.5 with sodium hydroxide solution.

Body Wash Cream for Sensitive Skin No. 505

		wt. %
A	VEEGUM® <i>Ultra</i> Magnesium Aluminum Silicate	2.0
	Deionized Water	63.0
B	Sodium Cocoyl Isothionate (Turanol® I-78 ¹)	25.0
	Cocamidopropyl hydroxysultaine (Mirataine® CBS ²)	10.0
C	Preservative	q.s.

¹Innospec Active Chemicals, Edison, NJ²Rhodia, Cranbury, NJ

Procedure: While heating the water to 60-65°C, slowly add the VEEGUM *Ultra* while agitating at maximum available shear. Continue mixing until fully hydrated. Maintaining temperature, slowly add Part B ingredients in the order shown, mixing after each addition until smooth and uniform. Cool with mixing to < 45°C and then add Part C. Adjust as necessary to pH 5.5 ± 0.5. This formula can be easily converted to a body scrub by incorporation of 5% polyethylene beads.

Bisabolol Cleansing Gel No. 557

		wt. %
A	VANZAN® NF-C Xanthan Gum	1.00
	Water	80.74
	Disodium EDTA	0.05
B	Bisabolol (Alpha-Bisabolol Natural ¹)	0.20
	Ethanol, 96%	15.00
	Panthenol (and) Propylene Glycol (D-Panthenol 50P ¹)	1.00
	PEG-40 Hydrogenated Castor Oil (Cremophor® CO 40 ¹)	2.00
C	Preservative	q.s.

¹BASF Corporation, Florham Park, NJ

Procedure: Slowly add the VANZAN NF-C to the water agitated at maximum available shear. Mix until fully dissolved. Add the disodium EDTA and mix until dissolved. Combine and mix the Part B ingredients until clear. Add Part B to Part A and mix until uniform. Add Part C and mix until uniform. Adjust as necessary to pH 6.5± 0.5.

Washing Gel with Tea Tree Oil No. 556

		wt. %
A	VANZAN® NF-C Xanthan Gum	1.00
	Water	72.32
	Disodium EDTA	0.05
B	Cocamidopropyl Betaine (Amphosol® CA ¹)	10.00
	Decyl Glucoside (Plantaren® 2000 N ²)	6.60
	Water (and) Melaleuca Oil (and) Ethoxylated Castor Oil (and) Polysorbate 20 (Water-Soluble Tea Tree Oil ³)	10.00
	Preservative	q.s.

¹Stepan Company, Northfield, IL²Cognis Corporation, Ambler, PA³Southern Cross Botanicals PTY Ltd, Lennox Head, NSW, Australia

Procedure: Slowly add the VANZAN NF-C to the water agitated at maximum available shear. Mix until fully dissolved. Add the disodium EDTA and mix until dissolved. Add the Part B ingredients in the order listed, mixing after each addition until uniform. Add Part C and mix until uniform. Adjust as necessary to pH 6.5 ± 0.5.

Extra Mild Facial Cleanser No. 553

		wt. %
A	VANZAN® NF Xanthan Gum	1.0
	Water	76.2
B	C12-15 Alkyl Benzoate (Finsolv® TN ¹)	5.0
	PEG-14 dimethicone (Dow Corning® 193 ²)	1.2
C	Cocamidopropyl Betaine (Amphosol® CA ³)	10.0
	Decyl Glucoside (Plantaren® 2000N ⁴)	6.6
D	Preservative	q.s.

¹Innospec Active Chemicals, Edison, NJ²Dow Corning Corporation, Midland, MI³Stepan Company, Northfield, IL⁴Cognis Corporation, Ambler, PA

Procedure: Sift the VANZAN NF into the water agitated at maximum available shear. Mix until completely dissolved. Blend Part B ingredients, then add to Part A and mix thoroughly. Add Part C ingredients separately and mix thoroughly after each addition. Avoid air entrapment. Add the preservative and mix until uniform.

Foot Scrub with Natural Exfoliant No. 576

		wt. %
A	VANATURAL® Bentonite Clay	3.00
	VANZAN® NF Xanthan Gum	0.75
	Water	75.75
B	Decyl Glucoside (Plantaren® 2000N ¹)	7.00
	Cocamidopropyl betaine (Amphosol® CA ²)	3.00
	Propylene Glycol (and) Water (and) Mentha Piperita (Peppermint) Leaf Extract (and) Mentha Piperita (Peppermint) Oil (Aromaphyte of Peppermint ³)	2.00
	Water (and) Melaleuca Oil (and) Ethoxylated Castor Oil (and) Polysorbate 20 (Water-Soluble Tea Tree Oil ⁴)	1.50
D	Zea Mays (Corn) Cob Powder (Processed Corn Cob (60/100)) ⁵	5.00
	Preservative	q.s.
E	Cocamide DEA (Ninol® 40-CO ²)	2.00

¹Cognis Corporation, Ambler, PA²Stepan Company, Northfield, IL³Active Organics Inc., Lewisville, TX⁴Southern Cross Botanicals PTY Ltd, Lennox Head, NSW, Australia⁵Mt. Pulaski Products, Inc., Mt. Pulaski, IL

Procedure: Slowly add the VANATURAL and VANZAN NF sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Slowly add Parts B, C, D, E and F in order, mixing after each until smooth while avoiding air entrapment and foaming.

Green Tea Instant Facial No. 542

		wt. %
VEEGUM® F	Magnesium Aluminum Silicate	5
	Kaolin Clay, Cosmetic Grade	67
	Zinc Oxide or Calamine, USP	20
	Polyvinylpyrrolidone (PVP K-30) ¹	5
	Allantoin ¹	2
	Green Tea Extract ²	1

¹International Specialty Products, Wayne, NJ²Greentech USA, Yarmouth, ME

Procedure: Mix powders until uniformly blended.

Use: Mix powder with sufficient water, witch hazel or honey to make a spreadable paste.

Exfoliating Facial Scrub Containing Tea Tree Oil No. 555

	wt. %	
A	Water	71.13
	VANZAN [®] NF-C Xanthan Gum	1.10
	Disodium EDTA	0.05
B	Cocamidopropyl Betaine (Amphosol [®] CA ¹)	10.00
	Plantaren [®] 2000N ² , Decyl Glucoside	6.60
	Water (and) Melaleuca Oil (and) Ethoxylated Castor Oil (and) Polysorbate 20 (Water-Soluble Tea Tree Oil ³)	10.00
	Melaleuca Alternifolia Leaf Powder (Melafresh [®] Exfol 100 ³)	1.00
	Preservative	q.s.
C	Triethanolamine	0.12

¹Stepan Company, Northfield, IL²Cognis Corporation, Ambler, PA³Southern Cross Botanicals PTY Ltd, Lennox Head, NSW, Australia

Procedure: Sift the **VANZAN NF-C** into the water agitated at maximum available shear. Mix until completely dissolved. Add Part B ingredients separately, mixing after each until uniform. Avoid air entrapment. Add the preservative and mix until uniform. Add triethanolamine to adjust pH to 6.5 ± 0.5.

Aloe & Oat Instant Mask No. 591

	wt. %
VEEGUM [®] HS Magnesium Aluminum Silicate	5.00
Kaolin USP	88.95
Aloe Barbadosensis Leaf Juice (and) Maltodextrin (Terra-Spray [™] Spray Dried Aloe Vera Powder 100X ¹)	1.00
Avena Sativa (Oat) Kernel Flour (Tech-O [®] #11-070 Oat Flour ²)	5.00
Cyclohexanecarboxamide, N-ethyl-5-methyl-2-(1-methylethyl)-(ICE 3000 Cooling Sensate (WS-3) ³)	0.05

¹Terry Laboratories, Melbourne, FL²Beacon CMP Corporation, Kenilworth, NJ³Qaroma, Baytown, TX**Procedure:** Dry blend all ingredients.**Use:** By volume, mix about 1 part water, witch hazel or cider vinegar into 4 parts of poultice powder and mix to form a smooth paste**SKIN CARE****Moisturizing Cream with Sunscreen No. 568**

	wt. %	
A	VEEGUM [®] Ultra, Magnesium Aluminum Silicate	1.5
	Water	74.5
	Glycerin, 96%	4.0
	Zinc Oxide (Zinc Oxide neutral H&R ¹)	2.0
B	Emulsifying Wax NF (Polawax ^{™2})	12.0
	PPG-2 Myristyl Ether Propionate (Crodamol [™] PMP ³)	4.0
	Octyl Methoxycinnamate (Neo Heliopan [®] AV ¹)	2.0
C	Preservative	q.s.

¹Symrise, Teterboro, NJ²Croda Inc., Edison, NJ

Procedure: While heating the water to 75-80°C, slowly add the **VEEGUM Ultra** while mixing at maximum available shear. Mix until fully hydrated. Add the remaining water phase ingredients, mixing until the zinc oxide is uniformly dispersed. Maintain the water phase at 75-80°C. Blend the Part B oil phase ingredients and heat to 75-80°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add Part C when the emulsion is <30°C.

Moisturizing Lotion with Sunscreen No. 567

	wt. %	
A	VEEGUM [®] Ultra Magnesium Aluminum Silicate	1.0
	Water	77.3
	Glycerin, 96%	2.7
B	Zinc Oxide (Zinc Oxide neutral H&R ¹)	2.0
	Glyceryl Stearate (and) Cetareth-20 (and) Cetareth-12 (and) Cetearyl Alcohol (and) Cetyl Palmitate (Emulgade [®] SE-PF ²)	6.0
	Glyceryl Stearate (Kessco [®] GMS Pure ³)	2.0
	Caprylic/Capric Triglyceride (Neobee M-5 ³)	5.0
	Mineral Oil, USP/NF Grade	2.0
C	Octyl Methoxycinnamate (Neo Heliopan [®] AV ¹)	2.0
	Preservative	q.s.

¹Symrise, Teterboro, NJ²Cognis Corporation, Ambler, PA³Stepan Company, Northfield, IL

Procedure: While heating the water to 85°C, slowly add the **VEEGUM Ultra** while mixing at maximum available shear. Mix until fully hydrated. Add the remaining water phase ingredients, mixing until the zinc oxide is uniformly dispersed. Maintain the water phase at 85°C. Blend the Part B oil phase ingredients and heat to 85°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add the Part C ingredients when the emulsion is <30°C.

Anti-Aging Skin Cream No. 578

	wt. %	
A	VEEGUM [®] Ultra Magnesium Aluminum Silicate	1.50
	VANZAN [®] NF, Xanthan Gum	0.30
	Water	75.92
	Butylene Glycol	6.00
B	Sucrose Stearate (Surfhope [®] SE Cosme C-1811 ¹)	3.00
	Steareth-2 (Brij [®] 72 ²)	1.50
	Steareth-21 (Brij [®] 721 ²)	1.50
	Cetearyl Alcohol	3.00
	Caprylic/ Capric Triglyceride (Neobee [®] M-5 Cosmetic ³)	2.50
	PPG-11 Stearyl Ether (Arlamol [®] F ²)	2.50
	C12-15 Alkyl Benzoate (Finsolv [®] TN ⁴)	1.00
	Cyclomethicone (Dow Corning [®] 345 Fluid ⁵)	1.00
	Cholesterol (Cholesterol NF ⁶)	0.10
	Linoleic Acid (Emersol [®] 315 ⁷)	0.10
	Ceramide 2 (TIC-001 Ceramide 2 ⁸)	0.025
Ceramide 3 (Ceramide III ⁹)	0.025	
Ceramide 6 II (Ceramide VI ⁹)	0.025	
C	Preservative	q.s.

¹Arch Personal Care Products L.P., South Plainfield, NJ²Uniqema, New Castle, DE³Stepan Company, Northfield, IL⁴Innospec Active Chemicals, Edison, NJ⁵Dow Corning, Midland, MI⁶Croda, Inc., Edison, NJ⁷Cognis Corporation, Ambler, PA⁸Takasago International Corp., Rockleigh, NJ⁹Evonik Goldschmidt Chemical Corporation, Hopewell, VA

Procedure: While heating the water to 85-90°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. Add the butylene glycol and sucrose stearate, mixing until uniform. Maintain the water phase at 85-90°C. Blend the Part B oil phase ingredients and heat to 85-90°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add the Part C ingredients when the emulsion is <30°C.

Organic Skin Lotion No. 594

		wt. %
A	VANATURAL [®] Bentonite Clay	2.5
	VANZAN [®] NF Xanthan Gum	0.5
	Water	56.0
B	Aloe Vera Gel, from Aloe Vera Whole Leaf	20.0
	Powder Organic Spray Dried 100X ¹ (1% powder/99% water)	
C	Cetearyl Wheat Straw Glycosides (and) Cetearyl Alcohol (Xyliance ^{™2})	5.0
	Butyrospermum Parkii (Shea) Butter (Shea Butter-Ultra Refined [™] Certified Organic ³)	3.5
	Theobroma cacao (cocoa) seed butter (Cocoa Butter-Ultra Natural [™] Certified Organic ³)	3.5
	Persea Gratissima (Avocado) Oil (Avocado Oil Certified Organic ³)	6.0
	Simmondsia Chinensis (Jojoba) Seed Oil (Jojoba Oil- Natural Golden- Certified Organic ³)	3.0
	D Preservative	q.s.

¹Terry Laboratories, Inc., Melbourne, FL²Actives International, Allendale, NJ³BioChemica Int'l, Inc., Melbourne, FL

Procedure: While heating the water to 75°C, slowly add the VANATURAL and VANZAN NF (sequentially or as a dry blend) while mixing at maximum available shear. Mix until fully hydrated. Prepare Part B by dissolving aloe vera powder in water then add slowly to Part A. Maintain the water phase temperature at 75°C. Combine Part C ingredients and heat to 75°C. Add Part C oil phase to Part A/B water phase and mix thoroughly. Cool with mixing; add Part D when the emulsion is <30°C.

All Natural Lotion No. 589

		wt. %
A	VANATURAL [®] Bentonite Clay	2.5
	VANZAN [®] NF Xanthan Gum	0.5
	Water	78.0
B	Cetearyl Wheat Straw Glycosides (and) Cetearyl Alcohol (Xyliance ^{™1})	5.0
	Orbignya Oleifera Seed Oil (Cropure [®] Babassu ²)	5.0
	Simmondsia chinensis (jojoba) seed oil (Jojoba Oil Golden ³)	5.0
	Butyrospermum Parkii (Shea) Butter (Tomasia Shea Butter ⁴)	2.0
	Theobroma cacao (cocoa) seed butter (Cocoa Butter NF ⁵)	2.0
	C Preservative	q.s.

¹Actives International, Allendale, NJ²Croda, Edison, NJ³Dessert Whale Jojoba Co., Tucson, AZ⁴Tri-K Industries, Inc., Northvale, NJ⁵RITA Corp., Crystal Lake, IL

Procedure: While heating the water to 70-75°C, slowly add the VANATURAL and VANZAN NF sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Maintain the water phase at 70-75°C. Blend the Part B oil phase ingredients and heat to 70-75°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add Part C when the emulsion is <30°C.

Cracked Skin Lotion No. 586

		wt. %
A	VANATURAL [®] Bentonite Clay	2.50
	Water	73.25
	Avena Sativa (Oat) Kernel Flour (Tech-O [®] #11-070 Oat Flour ¹)	1.00
A	VANZAN [®] NF Xanthan Gum	0.5
	Sucrose Stearate (Surfhope [®] SE Cosme C-1811 ²)	1.75
B	Sodium PCA (Ajidew [®] NL-50 ³)	3.00
	Glycerin, 96%	5.00
C	Glyceryl Stearate (and) PEG-100 Stearate (Arlacel [®] 165 VEG ⁴)	2.00
	Hydrogenated Polyisobutylene (Parleam ^{®5})	4.00
	Mineral Oil (and) Lanolin Alcohol (Vilvanolin [™] L-101 ⁶)	3.00
	Cetyl Alcohol	2.00
D	Isopropyl Myristate	2.00
	Preservative	q.s.
	Citric Acid, 20%	q.s.

¹Beacon CMP Corporation., Kenilworth, NJ²Arch Personal Care Products L.P., South Plainfield, NJ³Ajinimoto USA, Inc, Fort Lee, NJ⁴Uniqema, New Castle, DE⁵Rosow Cosmetiques-USA, Laurel, NY⁶Lubrizol Advanced Materials, Inc., Cleveland, OH

Procedure: While heating the water to 50-55°C, sift the VANATURAL into the water agitated at maximum available shear. Once dispersed, slowly sift in the oat flour. Mix until the VANATURAL is fully hydrated and the oat flour is well dispersed. Add the VANZAN NF and mix until dissolved. Add the sucrose stearate and mix until uniform. Add Part B ingredients and mix thoroughly. Maintain the water phase at 50-55°C. Blend the Part C oil phase ingredients and heat to 50-55°C. Add the oil phase to the water phase with good agitation; mix until uniform. Avoid incorporating air. Cool with mixing; add the preservative when the emulsion is <35°C. Adjust pH to 5.5 ± 0.5 with citric acid.

Moisturizing Skin Cream No. 588

		wt. %
A	VANATURAL [®] Bentonite Clay	2.50
	Water	82.25
	Avena Sativa (Oat) Kernel Flour (Tech-O [®] #11-070 Oat Flour ¹)	1.00
A	VANZAN [®] NF Xanthan Gum	0.50
	Sucrose Stearate (Surfhope [®] SE Cosme C-1811 ²)	1.25
B Butylene Glycol		5.00
C	Macadamia Ternifolia Nut Oil (Australian Macadamia Nut Oil – Cosmetic Grade ³)	4.50
	Cetearyl Alcohol	3.00
D Preservative		q.s.

¹Beacon CMP Corporation, Kenilworth, NJ²Arch Personal Care Products L.P., South Plainfield, NJ³Southern Cross Botanicals PTY, Lennox Head, NSW Australia

Procedure: While heating the water to 60-65°C, slowly add the VANATURAL while mixing at maximum available shear. Once dispersed, slowly sift in the oat flour. Mix until the VANATURAL is fully hydrated and the oat flour is well dispersed. Add the VANZAN NF and mix until dissolved. Add the sucrose stearate and mix until uniform. Add the butylene glycol and mix thoroughly. Maintain the water phase at 60-65°C. Blend the Part C oil phase ingredients 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; add Part D when the emulsion is <30°C.

Skin Softening Cream No. 575

		wt. %
A	VANATURAL [®] Bentonite Clay	2.0
	Water	72.2
	Butylene Glycol	5.0
B	Glyceryl Stearate SE (Dermalcare [®] GMS/SE ¹)	9.0
	Cetyl Alcohol (Crodacol [™] C-95 NF ²)	1.2
	Caprylic/Capric triglyceride (Neobee [®] M-5 Cosmetic ³)	1.5
	C12-15 Alkyl Benzoate (Finsolv [®] TN ⁴)	4.6
	Decyl Oleate (Tegosoft [®] DO ⁵)	2.0
	PEG-14 dimethicone (Abil [®] B 8843 ⁵)	0.5
C	Phenyl Trimethicone (Dow Corning [®] 556 Cosmetic Grade Fluid ⁶)	2.0
	Preservative	q.s.

¹Rhodia Inc., Cranbury, NJ²Croda Inc., Edison, NJ³Stepan Company, Northfield, IL⁴Innospec Active Chemicals, Edison, NJ⁵Evonik Goldschmidt Chemical Corporation, Hopewell, VA⁶Dow Corning Corporation, Midland, MI

Procedure: While heating the water to 75°C, slowly add the **VANATURAL** while mixing at maximum available shear. Mix until fully hydrated. Add the butylene glycol, mixing until uniform. Maintain the water phase at 75°C. Blend the Part B oil phase ingredients and heat to 75-80°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add Part C when the emulsion is <30°C.

Rejuvenating Lotion No. 574

		wt. %
A	VANATURAL [®] Bentonite Clay	2.0
	VANZAN [®] NF Xanthan Gum	0.5
	Water	72.5
	Butylene Glycol	3.0
B	Cyclomethicone (and) Dimethicone (and) Petrolatum (Gel Base BSM-PT ¹)	7.0
	C12-15 Alkyl Benzoate (Finsolv [®] TN ²)	4.0
	Cetearyl Alcohol	1.0
	Glyceryl Stearate (and) PEG-100 Stearate (Arlacel [®] 165 VEG ³)	5.0
	Water (and) Aloe Barbedensis Leaf Extract (and)	5.0
C	Yeast (Sacchromyces) Extract (Betavera ^{®1})	q.s.
	Preservative	q.s.

¹Arch Personal Care Products L.P., South Plainfield, NJ²Innospec Active Chemicals, Edison, NJ³Uniqema, New Castle, DE

Procedure: While heating the water to 70-75°C, slowly add the **VANATURAL** and **VANZAN NF** sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Add the butylene glycol, mixing until uniform. Maintain the water phase at 70-75°C. Blend the Part B oil phase ingredients and heat to 70-75°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add the Part C ingredients in order when the emulsion is <30°C.

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