



MEN'S 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 are 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 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 R	VANATURAL	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 R The standard grade for a wide range of applications.

Xanthan Gum:

VANZAN NF The standard grade for most personal care and pharmaceutical applications.

VANZAN NF-C Produces clear solutions; used when product clarity is essential.

FORMULARY

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Aerosol Shave Cream for Sensitive Skin No. 503

		Wt. %
A	VEEGUM® Ultra Magnesium Aluminum Silicate	1.5
	VANZAN® NF Xanthan Gum	0.3
	Water	67.2
B	Glycerin	3.0
	Butylene Glycol	3.0
C	Stearic Acid XXX	3.0
	Coconut Acid	3.0
	Safflower Oil	0.2
	Soybean Oil	0.2
	Cetyl Alcohol	1.0
	Dimethicone (XIAMETER® PMX-200 Silicone Fluid 350cs ¹)	1.0
	Lanolin Alcohol	0.1
	Isosorbide Laurate	1.0
	Mineral Oil	3.0
D	Sodium Cocoyl Sarcosinate, 30%	10.0
	Panthenol	0.5
	Aloe Vera	0.5
E	Triethanolamine	1.5
	Preservative, Fragrance	q.s.

Procedure: While heating the water to 75°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°C. Blend the Part C oil phase ingredients and heat to 75°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool while mixing. Add the Part D ingredients when the emulsion is <40°C. Add the Part E ingredients when the emulsion is <35°C. Adjust as necessary to pH 7.5 ± 0.5.

RAW MATERIAL SUPPLIERS
¹Dow Corning Corporation, Midland, MI

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Rev04/25/2013

Shaving Cream No. 501

	Wt. %
A	VEEGUM® Ultra Magnesium Aluminum Silicate 2.0
	VANZAN® NF Xanthan Gum 0.5
	Water 74.5
B	Cetyl Alcohol 0.5
	Glyceryl Monostearate SE 3.0
	Caprylic/Capric Triglyceride (Neobee® M-5 ¹) 2.0
	C12-15 Alkyl Benzoate (Finsolv® TN ²) 3.0
	Dimethicone (XIAMETER® PMX-200 Silicone Fluid 350cs ³) 3.0
	Lanolin Alcohol 1.0
Isosorbide Laurate 0.5	
Mineral Oil 5.0	
C	Sodium Lauroyl Sarcosinate, 30% 5.0
D	Triethanolamine or Citric Acid (to pH 5.75 ± 0.25) q.s.
	Preservative, Fragrance q.s.

Procedure: While heating the water to 75°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. Maintain the water phase at 75°C. Blend the Part B oil phase ingredients and heat to 75°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool while mixing. Add the Part C surfactant when the emulsion is <55°C. Add the Part D ingredients when the emulsion is <35°C. Adjust as necessary to pH 5.75 ± 0.25.

RAW MATERIAL SUPPLIERS
¹Stepan Company, Northfield, IL

²Innospec Active Chemicals, Edison, NJ

³Dow Corning Corporation, Midland, MI

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Xiameter is a registered trademark of Dow Corning Corporation.

Rev07/01/2013

Washing Cream for Sensitive Skin No. 505

		Wt. %
A	VEEGUM® Ultra Magnesium Aluminum Silicate	2.0
	Water	63.0
B	Sodium Cocoyl Isethionate (Pureact™ I-78 ¹)	25.0
	Cocamidopropyl Hydroxysultaine (Mirataine® CBS ²)	10.0
C	Preservative	q.s.

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.

RAW MATERIAL SUPPLIERS¹Innospec Active Chemicals, Edison, NJ²Solvay Novecare, Bruxelles, Belgium**TRADEMARKS****VEEGUM** is a registered trademark of Vanderbilt Minerals, LLC.

Mirataine is a registered trademark of Rhone-Poulenc, Inc.

Pureact is a trademark of Innospec Performance Chemicals Company.

Rev01/31/2013

Extra Mild Facial Cleanser No. 553

		Wt. %
A	VANZAN® NF-C Xanthan Gum	1.0
	Water	76.2
B	C12-15 Alky 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.

Procedure: Sift the **VANZAN® NF-C** 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.

RAW MATERIAL SUPPLIERS¹Innospec Active Chemicals, Edison, NJ²Dow Corning Corporation, Midland, MI³Stepan Chemical Co., Northfield, IL⁴Cognis Corporation, Ambler, PA**TRADEMARKS****VANZAN** is a registered trademark of Vanderbilt Minerals, LLC.

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Dow Corning is a registered trademark of Dow Corning Corporation.

Finsolv is a registered trademark of Innospec Performance Chemicals Company.

Plantaren is a registered trademark of Cognis GmbH Corporation.

Rev07/01/2013

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
	C Preservative	q.s.

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.

RAW MATERIAL SUPPLIERS¹Stepan Company, Northfield, IL²Cognis Corporation, Ambler, PA³Southern Cross Botanicals PTY Ltd, Lennox Head, NSW, Australia**TRADEMARKS****VANZAN** is a registered trademark of Vanderbilt Minerals, LLC.

Amphosol is a registered trademark of Stepan Company.

Plantaren is a registered trademark of Cognis GmbH.

Rev07/01/2013

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.

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.

RAW MATERIAL SUPPLIERS¹BASF Corporation, Florham Park, NJ**TRADEMARKS****VANZAN** is a registered trademark of Vanderbilt Minerals, LLC.

Cremophor is a registered trademark of BASF Aktiengesellschaft Corporation.

Rev01/30/2013

Green Tea Instant Face Mask No. 626

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

Procedure: Mix powders until uniformly blended.

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

RAW MATERIAL SUPPLIERS

¹Ashland Specialty Ingredients, Wilmington, DE

²Greentech USA, Yarmouth, ME

TRADEMARKS

VEEGUM is a registered trademark of Vanderbilt Minerals, LLC.

Rev06/13/2016

Body Wash Spray No. 500

	Wt. %
A VEEGUM® Ultra Magnesium Aluminum Silicate	2.0
Water	58.5
B Disodium Laureth Sulfosuccinate (Stepan Mild-SL3 ¹)	13.0
Cocamidopropyl Hydroxysultaine (Mirataine® CBS ²)	5.0
Polysorbate 20 (Tween® 20 ³)	1.5
Cocaimdopropyl Betaine (Amphosol® CA ¹)	3.0
Sodium Laureth Sulfate (Steol® CS-230 ¹)	14.0
Jojoba Esters (Floresters™-15 ⁴)	3.0
C Preservative, Fragrance	q.s.

Procedure: Slowly add the **VEEGUM® Ultra** to the water while mixing at maximum available shear. Mix until fully hydrated. At reduced mixing speed, very slowly add the Part B ingredients in the order shown, mixing after each addition until uniform. Add the Part C ingredients and adjust as necessary to pH 5.5 ± 0.5.

RAW MATERIAL SUPPLIERS
¹Stepan Company, Northfield, IL

²Solvay Novecare, Bruxelles, Belgium

³Croda, Inc., Edison, NJ

⁴Floritech Americas, Chandler, AZ

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Amphosol and Steol are registered trademarks of Stepan Company.

Floresters is a trademark of International Flora Technologies, Ltd.

Mirataine is a registered trademark of Rhone-Poulenc, Inc.

Tween is a registered trademark of Uniqema Americas LLC

Rev04/25/2013

Zinc Pyrithione Lotion Shampoo No. 364

		Wt.%
A	VEEGUM® R Magnesium Aluminum Silicate	0.5
	Water	51.1
	Hydroxypropyl Guar (Jaguar HP-60 ¹)	0.5
B	Ammonium Lauryl Sulfate (Rhodapon™ L-22 ¹)	40.0
	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.

Procedure: Slowly add the **VEEGUM® R** 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 order listed, agitating slowly. Mix until smooth and uniform. Avoid incorporation of air. Adjust as necessary to pH 7.2.

RAW MATERIAL SUPPLIERS¹Solvay Novecare, Bruxelles, Belgium²Croda Inc., Edison, NJ³Arch Personal Care Products L.P.,
South Plainfield, NJ**TRADEMARKS****VEEGUM** is a registered trademark of Vanderbilt Minerals, LLC.

Crodafos is a trademark of Croda, Inc.

Monamid is a registered trademark of Mona Industries, Inc.

Omadine is a registered trademark of Arch Chemicals, Inc.

Rhodapon is a trademark of Rhodia, Inc.

Rev07/01/2013

Natural Exfoliant Scrub 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
C Cocamidopropyl Betaine (Amphosol [®] CA ²)	3.00
Propylene Glycol (and) Water (and) <i>Mentha</i> Piperita (Peppermint) Leaf	2.00
Extract (and) <i>Mentha</i> Piperita (Peppermint) Oil (Aromaphyte of Peppermint ³)	1.50
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
E Cocamide DEA (Ninol [®] 40-CO ²)	2.00
F Preservative	q.s.

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.

RAW MATERIAL SUPPLIERS

¹Cognis Corporation, Ambler, PA

²Stepan Company, Northfield, IL

³Active Organics Inc., Lewisville, TX

⁴Southern Cross Botanicals PTY Ltd, Lennox Head, NSW, Australia

⁵Mt. Pulaski Products, Inc., Mt. Pulaski, IL

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Plantaren is a registered trademark of Cognis GmbH.

Rev07/01/2013

Men's Facial Balm with Hyaluronic Acid No. 558

	Wt.%
A VEEGUM® R Magnesium Aluminum Silicate	1.0
VANZAN® NF Xanthan Gum	0.5
Water	93.1
B Water (and) Triticum Vulgare (Wheat) Germ Extract (and) Saccharomyces Cerevisiae Extract (and) Sodium Hyaluronate (Eashave™ ¹)	4.0
Bisabolol ((±)-alpha-Bisabolol Synthetic ²)	0.2
Aloe Barbadosensis Leaf Juice (Aloe Vera Gel Regular 40X-AG046 ³)	1.0
Allantoin	0.2
C Preservative	q.s.

Procedure: 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 the Part B ingredients in the order listed and mix until uniform. Add Part C and mix until uniform. Adjust as necessary to pH 6.5 ± 0.5.

RAW MATERIAL SUPPLIERS

¹Pentapharm Ltd., Basel, Switzerland/Centerchem, Inc., Norwalk, CT

²BASF Corporation, Florham Park, NJ

³Terry Laboratories, Inc., Melbourne, FL

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Rev11/27/2018

Waterless Skin Scrub with D-Limonene No. 479

		Wt.%
A	VEEGUM® Ultra Magnesium Aluminum Silicate	2.0
	VANZAN® NF Xanthan Gum	0.6
	Water	51.7
B	Oleic Acid	10.0
	Mineral Oil	10.0
	Cetyl Alcohol	1.0
	Isosorbide Laurate	1.0
	Lanolin	1.0
C	Water	2.0
	Potassium Hydroxide	0.7
D	D-Limonene	10.0
E	Polyethylene Beads (A-C 9-A ¹)	10.0
F	Preservative, Fragrance	q.s.

Procedure: While heating the water to 75°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. Maintain the water phase at 75°C. Blend the Part B oil phase ingredients and heat to 75°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool while mixing. Add the Part C solution of potassium hydroxide in water when the emulsion is 45°C. Continue to cool while mixing and add Parts D, E and F when the emulsion is <35°C.

RAW MATERIAL SUPPLIERS
¹Honeywell Specialty Wax & Additives, Morristown, NJ

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Rev04/25/2013

Oatmeal Lotion No. 586

	Wt. %
A VANATURAL [®] or VANATURAL MC Bentonite Clay	2.50
Water	73.25
Avena Sativa (Oat) Kernel Flour (Tech-O [®] #11-070 Oat Flour ¹)	1.00
VANZAN [®] NF Xanthan Gum	0.50
Sucrose Stearate (Sisterna [®] SP50-C 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-PW (AP) ⁴)	2.00
Hydrogenated Polyisobutene (Parleam ^{®5})	4.00
Mineral Oil (and) Lanolin Alcohol (Vilvanolin [™] L-101 ⁶)	3.00
Cetyl Alcohol (Crodacol [™] C95-PA-MH ⁴)	2.00
Isopropyl Myristate NF (RITA IPM ⁷)	2.00
D Preservative	q.s.
Citric Acid, 20%	q.s.

Procedure: While heating the water to 50-55°C, sift the **VANATURAL**[®] or **VANATURAL MC** into the water agitated at maximum available shear. Once dispersed, slowly sift in the oat flour. Mix until the **VANATURAL** or **VANATURAL MC** 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.

RAW MATERIAL SUPPLIERS

¹Beacon CMP Corporation, Kenilworth, NJ

²Sisterna B.V., The Netherlands (Dist. In US & Canada by MMP, Inc., South Plainfield, NJ)

³Ajinimoto USA, Inc., Fort Lee, NJ

⁴Croda, Inc., Edison, NJ

⁵Rosow USA, Inc., Matawan, NJ

⁶Lubrizol Advanced Materials, Inc., Cleveland, OH

⁷RITA Corporation, Crystal Lake, IL

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Tech-O is a registered trademark of Beacon CMP Corporation.

Vilvanolin is a trademark of Lubrizol Advanced Materials, Inc.

rev01/18/2018

Conditioning Skin Cream with Jojoba Oil No. 571

	Wt. %
A VANATURAL[®] or VANATURAL MC Bentonite Clay	2.0
Water	73.0
Butylene Glycol	5.0
B Bis-PEG/PPG-16/16 PEG/PPG-16/16 Dimethicone; Caprylic/capric triglyceride (Abil [®] Care 85 ¹)	1.5
Cetyl Alcohol (and) Glyceryl Stearate (and) PEG-75 Stearate (and) Ceteth-20 (and) Steareth-20 (Emulium [®] Delta ²)	4.5
Cetyl Rinoleate (Tegosoft [®] CR ¹)	2.0
Simmondsia Chinesis (Jojoba) Seed Oil (Jojoba Oil Golden ³)	6.0
Cyclomethicone (XIAMETER [®] PMX-0345 Cyclosiloxane Blend ⁴)	6.0
C Preservative, Fragrance	q.s.

Procedure: While heating the water to 75°C, slowly add the **VANATURAL[®]** or **VANATURAL MC** 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 the Part C ingredients when the emulsion is <30°C.

RAW MATERIAL SUPPLIERS
¹Evonik Goldschmidt Chemical Company, Hopewell, VA

²Gatefosse Corporation, Paramus, NJ

³Desert Whale Jojoba Co., Inc., Tucson, AZ

⁴Dow Corning Corporation, Midland, MI

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Emulium is a registered trademark of Gatefosse SAS.

Tegosoft is a registered trademark of Goldschmidt GmbH.

Xiameter is a registered trademark of Dow Corning Corporation.

Rev04/17/2017

Skin Softening Cream No. 575

	Wt.%
A VANATURAL[®] or VANATURAL MC Bentonite Clay	2.0
Water	72.2
Butylene Glycol	5.0
B Glyceryl Stearate SE (Cutina [®] GMS SE ¹)	9.0
Cetyl Alcohol (Croda [™] 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
Phenyl Trimethicone (Dow Corning [®] 556 Cosmetics Grade Fluid ⁶)	2.0
C Preservative	q.s.

Procedure: While heating the water to 75°C, slowly add the **VANATURAL[®]** or **VANATURAL MC** 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.

RAW MATERIAL SUPPLIERS
¹Cognis Corporation, Ambler, PA

²Croda, Inc., Edison, NJ

³Stepan Company, Northfield, IL

⁴Innospec Active Chemicals, Edison, NJ

⁵Evonik Goldschmidt Chemical Corporation, Hopewell, VA

⁶Dow Corning Corporation, Midland, MI

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Cutina is a registered trademark of Cognis IP Management GmbH.

Dow Corning is a registered trademark of Dow Corning Corporation.

Finsolv is a registered trademark of Innospec Performance Chemicals Company.

Neobee is a registered trademark of Stephan Company.

Tegosoft is a registered trademark of Goldschmidt GmbH.

Rev04/17/2017

Vitamin-Enriched Skin Cream with Natural Moisturizers No. 545

	Wt.%
A	VEEGUM® R Magnesium Aluminum Silicate 1.00
	VANZAN® NF Xanthan Gum 0.25
	Water 79.75
B	Butylene Glycol 5.00
	Disodium EDTA 0.20
	D-Panthenol USP 0.20
C	Macadamia Ternifolia Nut Oil (Australian Macadamia Nut Oil – Cosmetic Grade ¹) 4.50
	Polyglyceryl-3 Distearate (Cremophor® GS32 ²) 3.00
	Ceteareth-25 (Cremophor® A25 ²) 1.50
	Cetearyl Alcohol 3.00
	Tocopherol Acetate (Vitamin E Acetate Oil USP, FCC ²) 0.50
D	Retinyl Palmitate (Vitamin A Palmitate ²) 0.10
E	Hyaluronic Acid (and) Water (Lipo Hyaluronic Acid 1% Solution) ³ 1.00
	Preservative 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
VEEGUM and **VANZAN** are registered trademarks of Vanderbilt Minerals, LLC. Cremophor is a registered trademark of BASF SE.

Rev11/02/2017

Skin Renewal Cream No. 573

	Wt. %
A VANATURAL[®] or VANATURAL MC Bentonite Clay	2.5
Water	77.0
Glycerin	5.0
B Cetearyl Alcohol (and) PEG-40 Castor Oil (and) Sodium Cetearyl Sulfate (Emulgade [®] F ¹)	5.0
Postassium Cetyl Phosphate (Crodafos [™] MCK ²)	0.5
Dicaprylyl Carbonate (Cetiol [®] CC ¹)	5.0
C12-15 Alkyl Ethylhexanoate (Finester [™] EH-25 ³)	5.0
C Preservative	q.s.

Procedure: While heating the water to 80°C, slowly add the **VANATURAL[®]** or **VANATURAL MC** while mixing at maximum available shear. Mix until fully hydrated. Add the glycerin, mixing until uniform. Maintain the water phase at 80°C. Blend the Part B oil phase ingredients and heat to 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.

RAW MATERIAL SUPPLIERS
¹BASF Corp., Florham Park, NJ

²Croda, Inc., Edison, NJ

³Innospec Active Chemicals, Edison, NJ

TRADEMARKS
VANATURAL is a registered trademark of Vanderbilt Minerals, LLC.

Cetiol is a registered trademark of Cognis GmbH.

Crodafos is a trademark of Croda, Inc.

Emulgade is a registered trademark of Cognis GmbH.

Finester is a trademark of Innospec Performance Chemicals Company.

Rev04/17/2017

Vitamin Enriched Barrier Cream No. 490

	Wt. %
A	VEEGUM® Ultra Magnesium Aluminum Silicate 0.80
	Carbomer (Carbopol® 934 ¹) 0.30
	Water 79.00
B	Glycerin 2.00
	Butylene Glycol 2.00
C	Cetyl Alcohol 0.50
	Glyceryl Monostearate SE 2.00
	Caprylic/Capric Triglyceride (Neobee® M-5 ²) 2.00
	C12-15 Octanoate (Finester™ EH-25 ³) 2.00
	Castor Oil/IPDI Copolymer (Polyderm™ PPI CO ⁴) 1.00
	Phenyl Dimethicone (DC 556 Fluid ⁵) 3.00
	Dimethicone (XIAMETER® PMX-200 Silicone Fluid 350cs ⁵) 1.00
	Bois Oil 0.50
	Steareth-2 (Brij® S2 ⁶) 0.95
	Steareth-21 (Brij® S721 ⁶) 0.95
D	Panthenol 1.00
	Vitamin E Acetate 0.50
	Vitamin A Palmitate 0.50
	Triethanolamine (to pH 5.8 ± 0.3) q.s.
E	Preservative, Fragrance q.s.

Procedure: Begin heating the water to 80°C. Slowly add the **VEEGUM® Ultra** and carbomer 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 to 80°C. Blend the Part C oil phase ingredients and heat to 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 <35°C. Adjust as necessary to pH 5.8 ± 0.3.

RAW MATERIAL SUPPLIERS
¹Lubrizol Advanced Materials Inc., Cleveland, OH

²Stepan Company, Northfield, IL

³Innospec Active Chemicals, Edison, NJ

⁴Alzo International Inc., Sayreville, NJ

⁵Dow Corning Corporation, Midland, MI

⁶Croda, Inc., Edison, NJ

TRADEMARKS
VEEGUM is a registered trademark of Vanderbilt Minerals, LLC.

Brij is a registered trademark of Uniqema Americas LLC.

Carbopol is a registered trademark of Lubrizol Advanced Materials, Inc.

Finester is a registered trademark of Innospec Performance Chemicals Company.

Neobee is a registered trademark of Stepan Company.

Polyderm is a trademark of Alzo Investments.

XIAMETER is a registered trademark of Dow Corning Corporation.

Rev04/25/2013

All Natural Shea Butter/Cocoa Butter 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 (Tomaso Shea Butter ⁴)	2.0
Theobroma Cacao (Cocoa) Seed Butter (Cocoa Butter NF ⁵)	2.0
C Preservative	q.s.

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.

RAW MATERIAL SUPPLIERS
¹Givaudan Active Beauty, New York, NY

²Croda, Inc., Edison, NJ

³Desert Whale Jojoba Co., Inc., Tucson, AZ

⁴Tri-K Industries, Inc., Northvale, NJ

⁵RITA Corporation, Crystal Lake, IL

TRADEMARKS
VANATURAL and **VANZAN** are registered trademarks of Vanderbilt Minerals, LLC.

Cropure is a registered trademark of Croda, Inc.

Xyliance is a trademark of Soliance.

Rev01/21/2013

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 Powder Organic Spray Dried 100X ¹ (1% powder/99% water) 20.0
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.

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.

RAW MATERIAL SUPPLIERS
¹Terry Laboratories, Inc., Melbourne, FL

²Actives International, Allendale, NJ

³BioChemica Int'l, Inc., Melbourne, FL

TRADEMARKS
VANATURAL and **VANZAN** are registered trademarks of Vanderbilt Minerals, LLC.

Ultra Natural and Ultra Refined are trademarks of BioChemica International, Inc.

Xyliance is a trademark of Soliance.

Rev01/30/2013

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 ¹)	2.0
B	Emulsifying Wax NF (Polawax™ NF ²)	12.0
	PPG-2 Myristyl Ether Propionate (Crodamol™ PMP ²)	4.0
	Octyl Methoxycinnamate (Neo Heliopan® AV ¹)	2.0
C	Preservative	q.s.

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.

RAW MATERIAL SUPPLIERS
¹Symrise, Teterboro, NJ

²Croda, Inc., Edison, NJ

TRADEMARKS
VEEGUM is a registered trademark of Vanderbilt Minerals, LLC.

Crodamol and Polawax are trademarks of Croda, Inc.

Neo Heliopan is a registered trademark of Haarmann & Reimer GmbH.

Rev04/25/2013

Wash-Off Resistant Sunscreen Cream No. 515

	Wt.%
A	VEEGUM® Ultra Magnesium Aluminum Silicate 2.0
	Carbomer (Ultrez™ 10 ¹) 0.2
	Water 47.8
B	Polysorbate 20 (Tween® 20 ²) 1.0
	Aqua (and) Titanium Dioxide (and) Alumina (and) Silica (and) Sodium 12.5
	Polyacrylate (and) Propylene Glycol (and) Diazolidinyl Urea (and) Methyl Paraben (and) Propyl Paraben (Tioveil® AQ-G ²)
	Butylene Glycol 3.0
C	Cetyl Alcohol 0.5
	Isosorbide Laurate 1.0
	Caprylic/Capric Triglyceride (Neobee® M-5 ³) 5.0
	Glyceryl Monostearate SE (Cutina® GMS SE ⁴) 3.0
	C12-15 Octanoate (Finester™ EH-25 ⁵) 3.0
	Octylmethoxycinnamate (Parsol® MCX ⁶) 7.0
	Avobenzene (Parsol® 1789 ⁶) 2.0
	Octyl Salicylate (Dermoblock™ OS ⁷) 3.0
	Castor Oil/IPDI Copolymer (Polyderm™ PPI-CO ⁷) 1.0
	Phenyl Dimethicone (DC 556 Fluid ⁸) 3.0
	Dimethicone (XIAMETER® PMX-200 Silicone Fluid 350cs ⁸) 1.0
	Laureth-23 (Brij® L23 ²) 0.5
Steareth-2 (Brij® S2 ²) 2.2	
Steareth-21 (Brij® S721 ²) 2.2	
D	Etidronic Acid 0.1
E	Triethanolamine (to pH 6.0±0.5) q.s.
	Preservative q.s.

Procedure: Begin heating the water to 80°C. Slowly add the **VEEGUM® Ultra** and carbomer 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 80°C. Blend the Part C 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 D and Part E ingredients when the emulsion is <45°C. Adjust as necessary to pH 6.0±0.5.

Note: The combination of TiO₂ and Avobenzene is not approved for use in the USA.

RAW MATERIAL SUPPLIERS

¹Lubrizon Advanced Materials, Inc., Cleveland, OH

²Croda, Inc., Edison, NJ

³Stepan Company, Northfield, IL

⁴BASF Care Creations, Florham Park, NJ

⁵Innospec Active Chemicals, Edison, NJ

⁶Givaudan Corporation, Teaneck, NJ

⁷Alzo International, Inc., Sayreville, NJ

⁸Dow Corning Corporation, Midland, MI

TRADEMARKS

VEEGUM is a registered trademark of Vanderbilt Minerals, LLC.

Brij and Tween are registered trademarks of Uniqema Americas LLC.

Cutina is a registered trademark of Cognis IP Management GmbH.

Dermoblock is a trademark of Alzo International, Inc.

Finester is a trademark of Innospec Performance Chemicals Company.

Neobee is a registered trademark of Stepan Company.

Parsol is a registered trademark of Givaudan Corporation.

Polyderm is a trademark of Alzo Investments.

Tioveil is a registered trademark of Acma Limited Corporation.

Ultrez is a trademark of Noveon IP Holdings.

Xiameter is a registered trademark of Dow Corning Corporation.

Oil-Free Moisturizing Gel No. 508

	Wt.%
VANZAN® NF-C Xanthan Gum	1.5
Glycerin, USP	20.0
Water	74.5
PPG-5-Ceteth-20 (Procetyl™ AWS ¹)	1.0
Preservative	q.s.
Sodium PCA (Ajidew® N-50 ²)	3.0

Procedure: Using the slowest mixing speed possible to avoid air entrapment, disperse the **VANZAN® NF-C** into the glycerin. Add the water and mix until the **VANZAN NF-C** is dissolved. Add the remaining ingredients in order, mixing until each is thoroughly incorporated.

RAW MATERIAL SUPPLIERS¹Croda, Inc., Edison, NJ²Ajinomoto USA, Inc., Fort Lee, NJ**TRADEMARKS****VANZAN** is a registered trademark of Vanderbilt Minerals, LLC.

Ajidew is a registered trademark of Ajinomoto Company, Inc.

Procetyl is a trademark of Croda, Inc.

Rev02/05/2013

Moisturizing Gel for Oily Skin with Hyaluronic Acid No. 554

	Wt.%
A Water	64.21
Sodium Hyaluronate (Lipo [®] Hyaluronic Acid, 1% Solution ¹)	1.00
Disodium EDTA	0.05
B Butylene Glycol (and) Water (and) Equisetum Hyemale Extract (Actiphtye [®] of Horsetail BG50P ²)	4.80
Butylene Glycol (and) Water (and) Hydrastis Canadensis (Golden Seal) Extract (Actiphtye [®] of Goldenseal BG50P ²)	4.80
Butylene Glycol (and) Water (and) Cymbopogon Schoenanthus Extract (Actiphtye [®] of Lemongrass BG50P ²)	4.80
Butylene Glycol (and) Water (and) Hamamelis Virginiana (Witch Hazel) Extract (Actiphtye [®] of Witch Hazel BG50P ²)	4.80
Butylene Glycol (and) Water (and) Humulus Lupulus (Hops) Extract (Actiphtye [®] of Hops BG50P ²)	4.80
C Water (and) Polysorbate 20 (and) PEG-40 Hydrogenated Castor Oil (and) Melaleuca Alternifolia (Tea Tree) Leaf Oil (Water-Soluble Tea Tree Oil ³)	9.70
VANZAN[®] NF-C Xanthan Gum	1.00
D Preservative	q.s.
E Triethanolamine	0.04

Procedure: Add Part A ingredients separately and mix thoroughly. Pre-blend Part B ingredients, add to the batch and mix until homogeneous. Add Part C ingredients separately, in the order shown. Sift the **VANZAN[®] NF-C** into an established vortex and mix until completely dissolved. The batch will thicken at this point. Add Part D and mix until homogeneous. Adjust pH to 6.5 ± 0.5 with triethanolamine.

RAW MATERIAL SUPPLIERS
¹Vantage Specialty Ingredients, Warren, NJ

²Lipotec USA, Inc., Lewisville, TX

³Southern Cross Botanicals PTY Ltd, Lennox Head, NSW, Australia

TRADEMARKS
VANZAN is a registered trademark of Vanderbilt Minerals, LLC.

Actiphtye is a registered trademark of Active Organics, LP.

Lipo is a registered trademark of Lipo Chemicals, Inc.

Rev11/27/2018



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33 WINFIELD STREET

NORWALK, CT 06856

800.562.2476

MINERALSALES@VANDERBILTMINERALS.COM

WWW.VANDERBILTMINERALS.COM



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