



Distributed in the Interest  
of Product Development

# VANDERBILT

## Minerals Technical Data

### VAN GEL<sup>®</sup> SX

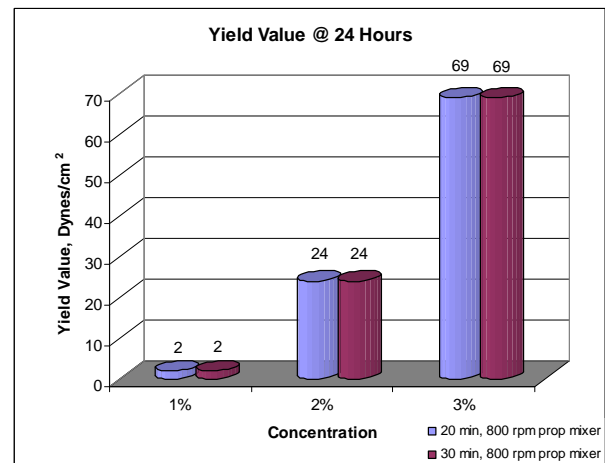
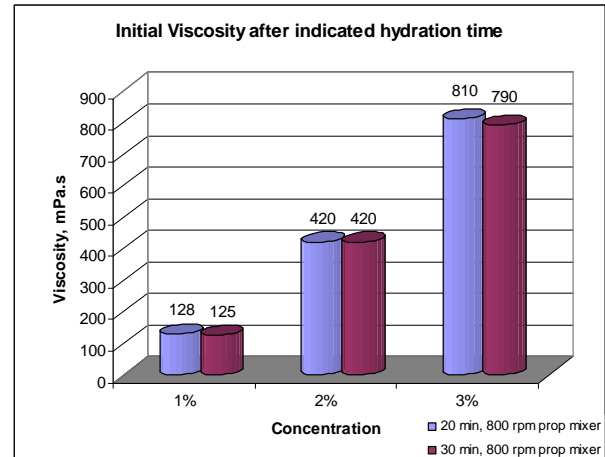
Magnesium Aluminum Silicate

### Bentonite and Xanthan Gum Blend

**VAN GEL<sup>®</sup> SX** is a tailored blend of natural bentonite clay and xanthan gum that is an efficient thickener, suspending agent and emulsion stabilizer for HI&I and agricultural formulations.

#### VAN GEL SX features:

- **Rapid hydration** – Mix until smooth. Hydrates quickly with low shear mixing in unheated water.
- **High yield value** – The synergistic combination of bentonite and xanthan gum effectively and reliably stabilizes water-based suspensions and emulsions.
- **Fine rheology control** – Because the clay-gum synergism provides efficient thickening as well as high yield value, stabilization is possible over a wide range of product viscosity.
- **Wide pH compatibility** – Suitable for use in most cleaners, polishes, agricultural concentrates and industrial suspension and emulsion products. Not recommended for compositions containing oxidizers or more than pH-adjusting levels of alkaline caustics.
- **Broad temperature stability** – Stabilizes suspensions and emulsions in the temperature range typical of storage and transportation.



#### Typical Properties:

Viscosity, 2%	300-500 cps
pH, 2%	7.5 – 9.5
Moisture	8% maximum

**Vanderbilt Minerals, LLC, 33 Winfield Street, P.O. Box 5150, Norwalk, CT 06856-5150**  
**Telephone: (800) 562-2476 - Fax: (203) 855-1220 - Web Site: [vanderbiltminerals.com](http://vanderbiltminerals.com)**

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## Minerals Formula

### Toilet Bowl Cleaner with “Green” Actives No. 605

		Wt. %
A	VAN GEL® SX Bentonite Clay (Bentonite (and) Xanthan Gum)	2.0
	Water	84.5
B	L(+)-lactic acid, 80% (PURAC® Sanilac <sup>1</sup> )	10.0
	Sodium methyl 2-sulfolaurate & Disodium 2-sulfolaurate (ALPHA-STEP® MC-48 <sup>2</sup> )	3.5

**Procedure:** Add the **VAN GEL SX** slowly to the water agitated at high speed. Mix until fully hydrated. Slowly add the Part B ingredients in order, mixing well after each until uniform. Avoid air entrapment.

#### RAW MATERIAL SUPPLIERS

<sup>1</sup>PURAC America, Lincolnshire, IL  
<sup>2</sup>Stepan Company, Northfield, IL

#### TRADEMARKS

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ALPHA-STEP is a registered trademark of Stepan Company.  
PURAC is a trademark of Purac AB.

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# VANDERBILT

## Minerals Formula

### Potassium Carbonate Oven Cleaner No. 606

		Wt. %
A	VAN GEL® SX Bentonite Clay (Bentonite (and) Xanthan Gum)	2.0
	Water	54.0
B	Triethanolamine	10.0
	Tripropyleneglycol Methyl Ether Solvent (DOWANOL® TPM <sup>1</sup> )	5.0
	Potassium Carbonate, 25% Solution	28.0
	Sodium Cocoyl Sarcosinate, 30% Solution (PERLASTAN® C-30 <sup>2</sup> )	1.0

**Procedure:** Add the **VAN GEL SX** slowly to the water agitated at high speed. Mix until fully hydrated. Reduce the mixing speed and add the Part B ingredients in order, mixing after each addition until uniform. Avoid air entrapment.

#### RAW MATERIAL SUPPLIERS

<sup>1</sup>Dow Chemical Company, Midland, MI

<sup>2</sup>Struktol Company of America, Stow, OH

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DOWANOL is a registered trademark of Dow Chemical Company.

PERLASTAN is a registered trademark of Schill & Seilacher GmbH.

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# VANDERBILT

## Minerals Formula

### Concentrated Phosphoric Acid Gel No. 607

		Wt. %
A	VAN GEL <sup>®</sup> SX Bentonite Clay (Bentonite (and) Xanthan Gum)	2.5
	Water	62.5
B	Phosphoric Acid, 85%	30.0
	Octoxynol-9 (TRITON <sup>®</sup> X-100 <sup>1</sup> )	5.0

**Procedure:** Add the **VAN GEL SX** slowly to the water agitated at high speed. Mix until fully hydrated. Reduce the mixing speed and add the Part B ingredients in order, mixing after each addition until uniform. Avoid air entrapment.

#### RAW MATERIAL SUPPLIERS

<sup>1</sup>Union Carbide Chemicals & Plastics  
Technology Corporation, Midland, MI

#### TRADEMARKS

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# VANDERBILT

## Minerals Formula

### Natural Citrus Furniture Polish No. 608

		Wt.%
<b>A</b>	<b>VAN GEL® SX</b> Bentonite Clay (Bentonite (and) Xanthan Gum)	2.0
	Water	72.65
<b>B</b>	Beeswax Emulsion (BE 720 <sup>1</sup> )	10.00
	Carnauba Emulsion (Kahl CE-404A <sup>1</sup> )	10.00
<b>C</b>	Emulsifying Agent (PLURONIC® L44 <sup>2</sup> )	0.35
	Orange Oil (Tech Grade d-limonene <sup>3</sup> )	5.00
<b>D</b>	Preservative	qs

**Procedure:** Add the **VAN GEL SX** slowly to the water agitated at high speed. Mix until fully hydrated. Slowly add the Part B and Part C ingredients in order, mixing well after each until uniform. Avoid air entrapment.

#### RAW MATERIAL SUPPLIERS

<sup>1</sup>Lambent Technologies Corp., Gurnee, IL

<sup>2</sup>BASF Performance Chemicals, Mount Olive, NJ

<sup>3</sup>Florida Chemical, Winter Haven, FL

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PLURONIC is a registered trademark of BASF Corporation.

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## Minerals Formula

### “Green” Waterless Hand Cleaner No. 615

		Wt. %
<b>A</b>	<b>VAN GEL® SX</b> Bentonite Clay (Bentonite (and) Xanthan Gum)	4.0
	Water	76.0
<b>B</b>	Propylene glycol, USP	5.0
	Sodium Lauryl Sulfate (Calfoam® SLS-30 <sup>1</sup> )	1.5
	Orange Oil (tech grade d-limonene <sup>2</sup> )	5.0
	C16-C18 Methyl Ester/Sodium Dioctyl Sulfosuccinate Surfactant Blend (Soygold 2500™ Rinseable Solvent <sup>3</sup> )	5.0
<b>C</b>	Juglans Regia (Walnut) Shell Powder (AD-9 Cosmetic Grade (Sterilized) 40/100 Walnut Shell Raw Material <sup>4</sup> )	3.5
<b>D</b>	Preservative	q.s.

**Procedure:** Sift the **VAN GEL SX** into an established vortex in the water. Mix until fully hydrated. Add the Part B ingredients and mix thoroughly after each. Sift in the ground walnut shell abrasive and mix thoroughly. Add the preservative (Part D) and mix thoroughly.

**Because of the solvents in the formula, verify compatibility with the intended packaging.**

#### RAW MATERIAL SUPPLIERS

<sup>1</sup>Pilot Chemical Company, Cincinnati, OH

<sup>2</sup>Florida Chemical, Inc., Winter Haven, FL

<sup>3</sup>Ag Environmental Products, LLC, Omaha, NE

<sup>4</sup>Composition Materials Co., Inc., Milford, CT

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Calfoam is a registered trademark of Pilot Chemical Company.

Soygold 2500 is a trademark of AG Environmental Products, LLC

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# VANDERBILT

## Minerals Formula

### Sulfur Flowable (6 lbs/gal), No. 616

		Wt.%
A	<b>VAN GEL</b> <sup>®</sup> SX Bentonite Clay (Bentonite (and) Xanthan Gum)	0.30
	Water	28.55
B	<b>DARVAN</b> <sup>®</sup> 670 Dispersing Agent (Sodium salt of poly-naphthalene sulfonic acid)	2.50
	Propylene Glycol	9.50
	2,4,7,9-Tetramethyldec-5-yne-4,7-diol (Surfynol <sup>®</sup> CT-211 Surfactant <sup>1</sup> )	0.10
	5-chloro-2-methyl-4-isothiazolin-3-one (and) 2-methyl-4-isothiazolin-3-one (Kathon <sup>®</sup> CG/ICP II <sup>2</sup> )	0.15
C	Sulfur (Yellow Jacket <sup>®</sup> Wettable Sulfur, 90.0% min. <sup>3</sup> )	58.90

**Procedure:** Using a Cowles Disperser or equivalent mixer, sift the **VAN GEL SX** into an established vortex in the water. Mix until fully hydrated. Slowly add the **DARVAN 670** and mix until thoroughly dissolved. Then, add the rest of Part B ingredients and mix completely after each. Slowly add the sulfur, Part C, increasing the mixer speed as needed. Mix until thoroughly dispersed.

#### RAW MATERIAL SUPPLIERS

<sup>1</sup>Air Products and Chemicals, Inc., Allentown, PA

<sup>2</sup>Dow Chemical, Midland, MI

<sup>3</sup>Georgia Gulf Sulfur Corporation, Valdosta, Georgia

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Surfynol is a registered trademark of Air Products and Chemicals, Inc.

Yellow Jacket is a registered trademark of Georgia Gulf Sulfur Corporation.

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