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# VANDERBILT

## Minerals Technical Data

### DARVAN® Dispersing Agent

**DARVAN** products are highly effective dispersing agents used to lower the viscosity of particulate slurries and to inhibit the settling of particulate solids. When finely divided solids are dispersed in water, there is a tendency for particles to form agglomerates or flocs. The addition of a **DARVAN** dispersant increases the strength of the anionic charge on the particles, causing them to repel one another and remain dispersed. The resulting dispersion has more fluidity, stability and smoothness. For example, pigment suspensions develop greater color strength, additive concentrates remain stable and fluid, pesticide sprays maintain maximum activity, impact grinding achieves maximum efficiency, and ceramic bodies attain optimal rheology.

#### TYPICAL PROPERTIES

Typical properties are not specifications. Please request copies of our **DARVAN** specifications.

	Form	Solids	MW	pH	Moisture	Foaming	Ash	Sodium
<i>Sodium Polynaphthalene Sulfonate</i>								
<b>DARVAN® 1 Spray</b> Dried Dispersing Agent	granules	---	800	8.0-10.5 <sup>1</sup>	5% max	none	---	---
<b>DARVAN 670</b>	powder	---	---	8.0-10.5 <sup>1</sup>	8% max	none	---	---
<b>DARVAN 670L</b>	liquid	40%	---	9.0-10.5 <sup>1</sup>	---	none	---	---
<i>Sodium Polymethacrylate</i>								
<b>DARVAN 7-NS</b>	powder	---	13,000	8.5-11.5 <sup>1</sup>	5% max	none	---	---
<b>DARVAN 7-N</b>	liquid	25%	13,000	9.5-11.5 <sup>2</sup>	---	none	---	---
<b>DARVAN 561</b>	liquid	30%	18,000	9.0-10.0 <sup>4</sup>	---	none	---	---
<i>Ammonium Polymethacrylate</i>								
<b>DARVAN C-N</b>	liquid	25%	15,000	7.5-9.0 <sup>2</sup>	---	none	<0.04%	<70 ppm
<i>Sodium Polyacrylate</i>								
<b>DARVAN 811D</b>	powder	---	3,500	6.0-9.0 <sup>2</sup>	8% max	none	---	---
<b>DARVAN 811</b>	liquid	43%	3,500	7.0-8.0 <sup>1</sup>	---	none	---	---
<i>Ammonium Polyacrylate</i>								
<b>DARVAN 821A</b>	liquid	40%	3,500	7.0-8.0 <sup>1</sup>	---	none	<0.01%	<50 ppm
<i>Sodium Polycarboxylate</i>								
<b>DARVAN 560*</b>	liquid	25%	3,000	9.5-11.5 <sup>4</sup>	---	none	---	---
<b>DARVAN MP-40</b>	liquid	39%	---	3.5-5.0 <sup>4</sup>	---	none	---	---
<i>Sodium Lignosulfonate</i>								
<b>DARVAN 2</b>	powder	---	---	7.0-9.0 <sup>3</sup>	---	slight	---	---

\*Sodium salt of hydrophobically modified maleic anhydride copolymer

<sup>1</sup>1% solution <sup>2</sup>5% solution <sup>3</sup>10% solution <sup>4</sup>neat

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The amount of **DARVAN®** Dispersing Agent required for dispersant and stabilization applications will vary with the composition of the product. Simple experimentation will determine the proper amount for each specific use. Usually, the concentration required is between 0.25% and 5.0%, based on the weight of the ingredient being dispersed. The optimal amount of dispersant can be determined by the dispersant demand curve method. A copy of this method is available on request.

## TYPICAL USES

See individual department data sheets for detailed use recommendations.

### DARVAN® Dispersing Agent

	1 Spray Dried	670	2	7-N, 7-NS, 561	811 811D	560	MP-40	821A	C-N
Color pigment dispersions	X	X	X	X	X	X	X		
Mineral dispersions	X	X	X	X	X	X			
Particulate chemical dispersions	X	X	X	X	X				
Agricultural pesticide concentrates	X	X	X	X					
Agricultural sprays	X	X	X	X					
Pitch Control (pulp & paper)	X	X							
Whiteware bodies, glazes, refractories				X	X				
Specialty ceramics requiring low Na								X	X
Spray dried slurries				X	X			X	X
Rubber Latexes	X								

## FDA STATUS

DARVAN® Dispersing Agent	FDA 21CFR	SUBJECT HEADING	LIMITATION
2, 7-N, 7-NS, 561	173.310	Boiler water additives	None
1 Spray Dried, 670, 2, 7-N, 7-NS, 811, 811D, 821A, 561	175.105	Adhesives	None
1 SPpray Dried 670	175.300	Resinous and polymeric coatings	≤0.6% by weight of cement solids in can end cements for containers having a capacity of not less than 5 gallons
1 Spray Dried, 670	176.170	Components of paper and paperboard in contact with aqueous and fatty foods	For use as an adjuvant to control pulp absorbency and pitch content prior to sheet-forming operations in paper manufacturing
2, 811, 811D	176.170	"	None
7-N, 7-NS, 561	176.170	"	≤0.3% by weight of the coating for viscosity control
1 Spray Dried, 670, 2, 811, 811D	176.180	Components of paper and paperboard in contact with dry food	None
1 Spray Dried, 670, 2	176.210	Defoaming agents used in the manufacture of paper and paperboard	None
1 Spray Dried, 670	177.1200	Cellophane	0.1% for use as an emulsifier
1 Spray Dried, 670, 2	177.1210	Closures with sealing gaskets for food containers	≤0.2% by weight of closure sealing gasket compositions
1 Spray Dried 670	177.1650	Polysulfide polymer-polyepoxy resins	None
1 Spray Dried, 670, 2	182.99	Adjuvants for pesticides chemicals	Surfactant
7-N, 7-NS, 561	182.99	"	pH control.
2	573.600	Lignin sulfonates (for animal feed)	≤4% of animal feed
<b>FDA 40CFR</b>			
1 Spray Dried, 670, 2	180.910	Inert ingredients used pre- and post-harvest; exemptions from the requirement of a tolerance.	Surfactant, related adjuvants of surfactants
1 Spray Dried, 670	180.920	Inert ingredients used pre-harvest; exemptions from the requirement of a tolerance.	Dispersant
1 Spray Dried, 670, 2	180.930	Inert ingredients applied to animals; exemptions from the requirement of a tolerance.	Surfactant, related adjuvants of surfactants
1 Spray Dried, 670	180.940	Tolerance exemptions for active and inert ingredients for use in antimicrobial formulations (Food-contact surface sanitizing)	When ready for use, the sulfonate chemicals in the solution is not to exceed 332 ppm naphthalene sulfonates

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