Antiperspirant and Deodorant Formulary

April, 2008

pure in cosmetics



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AEROSOL SPRAYS

Aerosol Antiperspirant with BENTONE GEL® VS-5PC V KR9/085

Advantages

The presence of BENTONE GEL[®] VS-5PC V, rheological additive in this system:

• Acts as a suspending agent

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5PC V (Cyclopentasiloxane and Disteardimonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	2.0
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	10.0
Dow Corning 200 Fluid 50 cs (Dimethicone)	Dow Corning	2.0
Alcohol Denatured		0.5
PHASE B		
Reach 501 (Aluminium Chlorohydrate)	Reheis	10.0
PHASE C		
Propellant		75.5

Mixing Procedure

- 1. Premix Phase A until homogeneous.
- 2. Add Phase B to Phase A.
- 3. Fill and charge with Phase C.

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Antiperspirant Spray with BENTONE GEL® VS-5PC V Clariant He 8/1

Advantages

The presence of BENTONE GEL® VS-5PC V, rheological additive in this system:

• Provides enhanced suspension of the active ingredient on shaking and during use.

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5PC V (Cyclopentasiloxane and Disteardimonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	5.0
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	9.0
Tegosoft TN (C ₁₂₋₁₅ Alkyl Benzoate)	Degussa	2.0
Silcare Silicone 31M30 (Caprylyl Trimethicone)	Clariant	1.0
PHASE B		
Locron L (Aluminum Chlorohydrate)	Clariant	9.0
Fragrance		0.2
PHASE C		
Isobutane/Butane Propellant		73.8

Mixing Procedure

- 1. Combine Phase A and mix until homogeneous.
- 2. Add Phase B and mix until uniform and smooth.
- 3. Place the mixture in suitable aerosol cans and charge with Phase C.

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Dry Powder Aerosol Antiperspirant with BENTONE GEL* VS-5PC V KR9/086

Advantages

The presence of BENTONE GEL[®] VS-5PC V, rheological additive in this system:

• Acts as a suspending agent

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5PC V (Cyclopentasiloxane and Disteardimonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	10.0
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	5.0
PHASE B		
Reach 501 (Aluminium Chlorohydrate)	Reheis	5.0
J-68 BC (Talc)	US Cosmetics	2.0
Fragrance		0.5
PHASE C		
Propellant		77.50

Mixing Procedure

- 1. Premix Phase A.
- 2. Add Phase B in the order listed.
- 3. Fill and charge with Phase C.

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Low VOC Antiperspirant Aerosol with BENTONE GEL® VS-5 V Dow Corning 00634

Advantages

The presence of BENTONE GEL[®] VS-5 V, rheological additive in this system:

- Provides enhanced suspension of the active ingredient on shaking and during use
- Helps dispense a uniform dosage of active ingredient
- Helps prevent valve clogging

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5 V (Cyclopentasiloxane and Disteardimonium Hectorite and SD Alcohol)	ELEMENTIS Specialties	14.0
Dow Corning 245 Fluid (Dimethicone and	Dow Corning	30.0
Trisiloxane)		
Dow Corning 200 Fluid 50 cs (Dimethicone)	Dow Corning	5.5
PHASE B		
Reach 103 (Aluminum Chlorohydrate)	Reheis	10.0
PHASE C		
Fragrance		0.5
PHASE D		
Isobutane		40.0

Mixing Procedure

- 1. Combine Phase A and mix for 10 minutes until homogeneous using a Lightning overhead mixer or equivalent.
- 2. Add Phase B to Phase A at a slow rate and mix until uniform and smooth.
- 3. Add Phase C to Phase A+B and mix.
- 4. Charge using Phase D.

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Talc Spray Antiperspirant with BENTONE GEL® IPM V TS-245

Advantages

The presence of BENTONE GEL® IPM V, rheological additive in this system:

- Provides enhanced suspension of the active ingredient on shaking and during use
- Helps dispense a uniform dosage of active ingredient
- Helps prevent valve clogging

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] IPM V (Isopropyl Myristate and Stearalkonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	8.0
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	5.0
Ethanol		2.0
Tegosoft M (Isopropyl Myristate)	Degussa	1.5
PHASE B		
Locron L (Aluminum Chlorohydrate)	Clariant	6.0
J-68 BC (Talc)	US Cosmetic Group	2.0
PHASE C		
Fragrance		0.5
PHASE D		
Isobutane/Butane Propellant		75.0

Mixing Procedure

- 5. Combine Phase A using medium shear equipment.
- 6. Add Phase B to Phase A at a slow rate and mix until uniform and smooth.
- 7. Add Phase C to Phase A+B and mix.
- 8. Charge using Phase D.

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ROLL-ON ANTIPERSPIRANT/DEODORANTS

Anhydrous Roll-On Antiperspirant with BENTONE GEL* VS-5PC V KR5/139

Advantages

The presence of BENTONE GEL® VS-5PC V, rheological additive in this system:

- Improves application
- · Provides enhanced suspension of the active ingredient on shaking and during use

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5PC V (Cyclopentasiloxane and Disteardimonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	3.0
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	69.0
Dow Corning 200 Fluid 50 cs (Dimethicone)	Dow Corning	5.0
Alcohol Denatured		2.0
PHASE B		
Reach AZP-908 (Aluminium Zirconium Tetrachlorohydrex-Gly)	Reheis	20.0
PHASE C	•	•
Fragrance		1.0

Mixing Procedure

- 1. Thoroughly combine Phase A using a silverson homogeniser.
- 2. Add Phase B to Phase A with slow speed propeller stirring.
- 3. Add Phase C to Phase A+B and mix until uniform.

N.B This is a suspension roll-on so will separate over time. Product to be shaken before use.

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Anhydrous Roll-On Antiperspirant with BENTONE GEL[®] VS-5PC V Exxon Mobil Chemical 1373101

Advantages

The presence of BENTONE GEL[®] VS-5PC V, rheological additive in this system:

- Improves application
- Provides enhanced suspension of the active ingredient on shaking and during use

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5PC V (Cyclopentasiloxane and Disteardimonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	20.0
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	33.7
PHASE B		
PureSyn 8 (Hydrogenated Polydecene)	Exxon Mobil Chemical	20.0
Reach AZP-908 (Aluminium Zirconium Tetrachlorohydrex GLY)	Reheis	20.0
J-68 BC (Talc)	US Cosmetic Group	2.0
PHASE C		
Dow Corning 193 Surfactant (PEG-12 Dimethicone)	Dow Corning	4.0
Fragrance		0.3

Mixing Procedure

- 1. Mix Phase A together using a silverson homogeniser at 3000 rpm for 3 minutes.
- 2. Add Phase B to Phase A and continue mixing.
- 3. Add Phase C to Phase A+B and continue mixing until uniform.

N.B. This is a suspension roll-on so will separate over time. Product to be shaken before use.

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Anhydrous Roll-On Deodorant with BENTONE GEL® VS-5 V KR5/136

Advantages

The presence of BENTONE GEL[®] VS-5 V, rheological additive in this system:

- Improves application
- Provides enhanced suspension of the active ingredient on shaking and during use

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5 V (Cyclopentasiloxane and Disteardimonium Hectorite and SD Alcohol)	ELEMENTIS Specialties	15.0
Dow Corning 2-1184 Fluid (Trisiloxane and Dimethicone)	Dow Corning	65.0
PHASE B		
Reach AZP-908 PG (Propylene Glycol and Aluminium Zirconium Tetrachlorohydrex Gly)	Reheis	20.0

Mixing Procedure

- 1. Thoroughly combine Phase A using a silverson homogeniser.
- 2. Add Phase B to Phase A and mix until uniform.

N.B This is a suspension roll-on so will separate over time. Product to be shaken before use.

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Antiperspirant Roll-On with BENTONE GEL[®] IPM V KR5/135

Advantages

The presence of BENTONE GEL® IPM V, rheological additive in this system:

- Improves application
- · Provides enhanced suspension of the active ingredient on shaking and during use

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] IPM V (Isopropyl Myristate and Stearalkonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	15.0
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	27.0
Alcohol Denatured		3.0
PHASE B		
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	27.0
Dow Corning 200 Fluid 350cs (Dimethicone)	Dow Corning	2.0
PHASE C		
Reach 501 (Aluminium Chlorohydrate)	Reheis	25.0
PHASE D		
Fragrance		1.0

Mixing Procedure

- 1. Thoroughly combine Phase A using a silverson homogeniser.
- 2. Add Phase B to Phase A and continue mixing.
- 3. With slow speed propeller stirring add Phase C to Phase A+B.
- 4. Add Phase D to Phase A+B+C and mix until uniform.

N.B. This is a suspension roll-on so will separate over time. Product to be shaken before use.

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Quick Drying Roll-On Antiperspirant with BENTONE GEL® VS-5PC V S. Black 1332

Advantages

The presence of BENTONE GEL® VS-5PC V, rheological additive in this system:

- Improves application
- Provides enhanced suspension of the active ingredient on shaking and during use

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5PC V (Cyclopentasiloxane and Disteardimonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	15.0
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	54.0
Alcohol Denatured		3.0
Lexol IPM-NF (Isopropyl Myristate)	Inolex	2.0
PHASE B		
Reach 501 (Aluminium Chlorohydrate)	Reheis	25.0
Fragrance		1.0

Mixing Procedure

- 1. Thoroughly mix Phase A using a silverson homogeniser.
- 2. Add Phase B to Phase A with slow speed propeller stirring. Mix until homogeneous.

N.B. This is a suspension roll-on so will separate over time. Product to be shaken before use.

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Roll-On Antiperspirant with BENTONE GEL® VS-5PC V RECF- 129

Advantages

The presence of BENTONE GEL[®] VS-5 V, rheological additive in this system:

- Provides suspension control
- Improves storage stability
- Reduces applicator ball sticking
- Overcomes product leakage
- Improves skin feel
- Reduces stickiness

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5 V (Cyclopentasiloxane and	ELEMENTIS Specialties	15.0
Disteardimonium Hectorite and SD Alcohol Denat.)	ELEMENTIS Specialities	15.0
Dow Corning 344 Fluid (Cyclomethicone)	Dow Corning	45.0
Dow Corning 245 Fluid (Cyclopentasiloxane)	Dow Corning	17.5
Dow Corning 200 Fluid 50 cs (Dimethicone)	Dow Corning	2.5
PHASE B		
Reach AZP-908 (Aluminium Zirconium	Reheis	20.0
Trichlorohydrex GLY)		
PHASE C		
Fragrance		q.s

Mixing Procedure

- 1. Thoroughly mix Phase A using a silverson homogeniser.
- 2. Transfer the batch to a paddle stirrer and slowly add Phase B.
- 3. Add Phase C and remove from the stirrer when the product is homogeneous.

N.B. This is a suspension roll-on so will separate over time. Product to be shaken before use.

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Suspension Roll-On with BENTONE GEL® VS-5PC V National Starch 7761-103

Advantages

The presence of BENTONE GEL® VS-5PC V, rheological additive in this system:

- Improves application
- Provides enhanced suspension of the active ingredient on shaking and during use

Ingredient	Supplier	% w/w	
PHASE A			
BENTONE GEL [®] VS-5PC V (Cyclopentasiloxane and Disteardimonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	14.0	
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	45.5	
PHASE B			
Crodamol DOA (Diethylhexyl Adipate)	Croda	10.0	
Dry Flo AF (Corn Starch Modified)	National Starch	10.0	
PHASE C			
Rezal 36G (Water and Aluminium Zirconium Tetrachlorohydrex GLY)	Reheis	20.0	
Silica		0.5	

Mixing Procedure

- 1. Thoroughly mix Phase A using a silverson homogeniser.
- 2. Add a slurry of Phase B to Phase A and continue to mix for 20 minutes.
- 3. With slow speed propeller stirring add Phase C to Phase A+B and mix for 15 minutes.

N.B. This is a suspension roll-on so will separate over time. Product to be shaken before use.

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Viscous Antiperspirant Emulsion with BENTONE GEL® VS-5PC V Clariant AVII 2020

Advantages

The presence of BENTONE GEL[®] VS-5PC V, rheological additive in this system:

• Provides enhanced stability and application within the product.

Ingredient	Supplier	% w/w
PHASE A		
BENTONE GEL [®] VS-5PC V (Cyclopentasiloxane and	ELEMENTIS Specialties	2.0
Disteardimonium Hectorite and Propylene Carbonate)	LEEWIEN ITS Specialities	2.0
Genapol HS 200 (Steareth-20)	Clariant	3.0
Tego Alkanol 18 Pellets (Stearyl Alcohol)	Degussa	2.5
Cetiol OE (Dicaprylyl Ether)	Cognis	2.0
Cetiol LC (Coco Caprylate/Caprate)	Cognis	2.0
Tegin 4100 Pellets (Glyceryl Stearate)	Degussa	2.0
Genapol HS 020 (Steareth-2)	Clariant	1.5
Eutanol G (Octyldodecanol)	Cognis	0.5
Silcare Silicone 31M30 Caprylyl Trimethicone (Caprylyl	Clariant	0.3
Trimethicone)		
PHASE B		
Deionised Water		62.4
Locron L (Aluminium Chlorohydrate)	Clariant	20.0
Glycerin		1.0
Persea Grantissima (Avocado) Extract		0.3
Allantoin	Clariant	0.2
PHASE C		
Fragrance		0.3

Mixing Procedure

- 1. Heat Phase A together to 70°C.
- 2. Heat Phase B together to 70°C.
- 3. Add Phase B into Phase A while stirring using a propeller stirrer. Continue mixing until cool.
- 4. At 35°C add Phase C and mix until homogeneous.

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ANTIPERSPIRANT/DEODORANT STICKS

Dry Antiperspirant Stick with BENTONE GEL® VS-5PC V TS-289

Advantages

The presence of BENTONE GEL® VS-5PC V, rheological additive in this system:

- Provides thermostable viscosity control
- Enhances skin feel
- Improves application

Ingredient	Supplier	% w/w
PHASE A	· · · ·	
Dow Corning 345 Fluid (Cyclomethicone)	Dow Corning	39.7
PHASE B		
Tego Alkanol 1618 (Cetearyl Alcohol)	Degussa	22.0
Lexemul 561 (Glyceryl Stearate and PEG-100 Stearate)	Inolex	2.0
C47-051 (CI 77891)	Sun Chemical	0.2
PHASE C		
BENTONE GEL [®] VS-5PC V (Cyclomethicone and Disteardimonium Hectorite and Propylene Carbonate)	ELEMENTIS Specialties	10.0
PHASE D		
Reach 501 (Aluminium Chlorohydrate)	Reheis Inc	25.0
J-68 BC (Talc)	US Cosmetic Group	1.0
PHASE E		
Fragrance		0.1

Mixing Procedure

- 1. Heat Phase A to 65°C and add Phase B. Mix using a Silverson homogeniser.
- 2. Add Phase C to Phase A+B and continue mixing for 30 minutes.
- 3. Add Phase D to Phase A+B+C and continue mixing until homogenous.
- 4. Cool to 35°C and add Phase E.

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24 Hour Antiperspirant/Deodorant Stick with THIXCIN® R KR9/056 ref Degussa

Advantages

The presence of THIXCIN[®] R, rheological additive in this system:

- Imparts smoother surface appearance
- Provides desired rheological properties

Ingredient	Supplier	% w/w		
PHASE A				
Tego Alkanol 18 Pellets (Stearyl Alcohol)	Degussa	16.25		
Varonic APS (PPG-11 Stearyl Ether)	Degussa	5.0		
Varonic APM (PPG-3 Myristyl Ether)	Degussa	5.0		
PHASE B				
THIXCIN [®] R (Trihydroxystearin)	ELEMENTIS Specialties	1.75		
PHASE C	·			
Dow Corning 246 Fluid (Cyclohexasiloxane and	Dow Corning	44.5		
Cyclopentasiloxane)	_			
PHASE D				
Reach 501 (Aluminium Chlorohydrate)	Reheis	20.0		
Aerosil R 972 (Silica Dimethyl Silylate)	Degussa	3.0		
PHASE E				
Tegodeo LYS (Zinc Ricinoleate and Lysine and	Degussa	4.0		
Propylene Glycol)				
Tego Cosmo P 813 (Polyglyceryl-3 Caprylate)	Degussa	0.5		

Mixing Procedure

- 1. Melt Phase A together at 80-85°C.
- 2. Add Phase B to Phase A and mix for 20 minutes using a silverson homogeniser.
- 3. Cool to 75-78°C.
- 4. Add Phase C while stirring and stir for another 15 minutes.
- 5. While stirring add Phase D. Stir until homogenously dispersed.
- 6. Add Phase E and stir for another 5 minutes.
- Compensate for the loss of Cyclopentasiloxane (and) Cyclohexasiloxane prior to filling (temperature 68-70°C).

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