



Beauty & Personal Care  
Solutions



## Formulation Information and Troubleshooting Guide

Hair Care Applications



## About This Guide

*This guide offers thought-starting hair care formulation suggestions as well as potential solutions to many common formulating challenges.*

*We invite you to cut out the pages. Write notes in the margins. And make this guide your own.*



### Table of Contents

Sample Hair Care Formulations.....	4
Troubleshooting Suggestions for Typical Application Issues.....	20

### Sample Hair Care Formulations

The following information represents a broad range of suggested formulations that can be used as a starting point to help meet a variety of hair care application, cost and benefit requirements.

These suggested formulations are only representative formulations and they are not commercialized products. Dow Corning believes that the information and data on which these formulations are based are reliable, but the formulations have not been subjected to extensive testing for performance, efficacy or safety. **BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATIONS OR ANY VARIATIONS OF THEM TO DETERMINE THEIR PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION.** In addition, Dow Corning has not undertaken a comprehensive patent search on the formulations. Suggestions of uses should not be taken as inducements to infringe any particular patent.

## Formulation Index

*The formulations in each of the following categories are listed in order of their cost/benefit profiles – from “economical” to “high-end.”*

### **Leave-in Formulations:**

Spray (Aerosol/Pump): Improved Wet and Dry Combing, Shine, Sprayable ..... 4 Formulation 01203	4
Sparkling Berry Styling Gel: Clear Gel – Jellylike Texture ..... 5 Formulation 01154	5
Leave-in Conditioner: Shine, Smooth Feel, Soft Feel ..... 6 Formulation 00815	6
Leave-in Conditioner: Fresh Effect..... 7 Formulation 00816	7
Styling Mousse: Color Protection, Heat Protection, Strengthening..... 8 Formulation 00818	8
Hair Spray: Shake Before Use; Two Phases – Milky and Clear ..... 9 Formulation 01655	9

### **Leave-in Anhydrous Formulations:**

Hair After Sun: Cuticle Coat – Color Protection, Hair Serum Gel, Heat Protection ..... 10 Formulation 01132	10
Leave-on Conditioner: Cuticle Coat – Anhydrous, Clear..... 11 Formulation 01550	11

### **Leave-in Formulations Using XIAMETER® brand Products Sold in Asia:**

Two-Layer Silk & Milk Leave-in Conditioner: Ease of Combing, Nongreasy, Silky Smooth ..... 12 Formulation 01782	12
Two-Layer Crystal Hair Shine Leave-in Conditioner: Ease of Combing, Gloss, Shine ..... 13 Formulation 01783	13

### **Rinse-off Formulations:**

Rinse-off Conditioner: Colored and Permed Hair ..... 14 Formulation 01270	14
Rinse-off Conditioner: Enhanced Dry Combing, Enhanced Wet Combing ..... 15 Formulation 01397	15
Intensive Conditioner: Rinse-off Conditioner – Enhanced Dry Combing, Enhanced Wet Combing..... 16 Formulation 00214	16

### **Shampoo Formulations:**

Clear Shampoo: Normal to Greasy Hair ..... 17 Formulation 01263	17
Shampoo: Clear, Extra Shine, Mild Conditioning ..... 18 Formulation 00145	18
Clear Shampoo: Colored and Permed Hair..... 19 Formulation 01265	19

## Spray (Aerosol/Pump): Improved Wet and Dry Combing, Shine, Sprayable

### ATTRIBUTES

- Clear
- Contains natural ingredients
- Improved wet and dry combing
- Shine
- Sprayable

### XIAMETER® BRAND PRODUCTS

- XIAMETER® OFX-5330 Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Water	92.1	
2. Disodium EDTA	0.2	Trilon BD/BASF Corporation
3. Panthenol	0.5	D-Panthenol 75 L/BASF Corporation
4. Glycerin (and) water (and) Pentylene Glycol (and) PEG-40 Hydrogenated Castor Oil (and) Trideceth-9 (and) whey	1.2	Extrapone Whey/Symrise
5. Hydrolyzed Vegetable Protein PG-Propyl Silanetriol	0.8	Keravis/Croda
<b>Phase B</b>		
6. PEG/PPG-15/15 Dimethicone	3	XIAMETER® OFX-5330 Fluid
<b>Phase C</b>		
7. Preservative (choice)	0.7	
<b>Phase D</b>		
8. Fragrance	0.5	
9. Coceth-7 and PPG-1-PEG-9 Lauryl Glycol Ether and PEG-40 Hydrogenated Castor Oil	1	Eumulgin HPS/BASF Care Chemicals (Cognis Corporation)

### Procedure

1. Mix ingredients of phase A together.
2. Add phase B to phase A with gentle mixing.
3. Add preservative.
4. Mix phase D ingredients together.
5. Add phase D to mixture (A+B+C). Mix until homogeneous.

### Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

### Stability

Stable for at least 1 month at room temperature. Stable for at least 1 month at 40°C.

### External Reference Material

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

#### SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Sparkling Berry Styling Gel: Clear Gel – Jellylike Texture

## ATTRIBUTES

- Medium fixation
- Jellylike texture

## XIAMETER® BRAND PRODUCTS

- XIAMETER® OFX-5324 Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Water	91.6	
2. VP/Acrylates/Lauryl Methacrylate Copolymer	1.5	Styleze 2000/ISP
3. Acrylates/Beheneth-25 Methacrylate Copolymer	3	Aculyn 28/The Dow Chemical Company
4. EDTA	0.1	EDTA/Merck KGaA
5. Propylene Glycol (and) Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate	0.5	Liquid Germall Plus/ISP
6. Red 40 (0.1% in water)	1	FD&C Red 40 07700/Sensient
7. Perfume	0.5	Raspberry Sorbet/CPL Aroma
8. PEG-12 Dimethicone	1	XIAMETER® OFX-5324 Fluid
9. Sodium Hydroxide (25% solution in water)	0.8	
<b>Phase B</b>		
10. Lactose (and) Cellulose (and) Hydroxypropyl Methylcellulose (and) Tocopheryl Acetate (and) Iron Oxides (and) Mica (and) Titanium Dioxide	q.s.	Lipobead Red-E/Lipo Technologies
11. Lactose (and) Cellulose (and) Hydroxypropyl Methylcellulose (and) Titanium Dioxide (and) Tocopherol Acetate (and) Iron Oxides	q.s.	Lipobead Yellow-EL/Lipo Technologies

## Procedure

1. Disperse ingredient 2 into water.
2. When homogeneous, add ingredient 3 and mix well.
3. When homogeneous, add ingredients 4 through 8 in order listed under slow mixing.
4. Neutralize to pH 6 with NaOH.
5. Finally, add phase B ingredients and mix with moderate mixing speed.

## Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

## Stability

Stable for at least 6 months at room temperature and 40°C.

## External Reference Material

The suggested percentages of Lipobead™ Red-E and Lipobead™ Yellow-EL in the formulation are 0.5%. Color and perfume can be adapted to create a specific effect.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

## SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.

XIAMETER is a registered trademark of Dow Corning Corporation.

All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Leave-in Conditioner: Shine, Smooth Feel, Soft Feel

**ATTRIBUTES**

- Long-lasting
- Nourishing feel
- Shine
- Smooth feel
- Soft feel

**XIAMETER® BRAND PRODUCTS**

- XIAMETER® MEM-7137 Emulsion
- XIAMETER® OFX-0193 Fluid
- XIAMETER® PMX-0225 Silicone Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Dimethicone	5	XIAMETER® PMX-0225 Silicone Fluid
2. Perfume	0.2	
3. Dimethicone (and) Cocamidopropyl Betaine	5	XIAMETER® MEM-7137 Emulsion
<b>Phase B</b>		
4. Panthenol	0.1	D-Panthenol USP/BASF Corporation
5. Water	85.7	
6. Sodium Chloride	0.5	
7. Blue 1	q.s.	
8. Preservative (choice)	0.5	
9. PEG-12 Dimethicone	3	XIAMETER® OFX-0193 Fluid

**Procedure**

1. Combine phase A ingredients and mix.
2. Mix phase B ingredients together.
3. Add phase A to phase B with gentle mixing.

**Variations**

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

**Stability**

Stability data for this formulation has not been established.

**External Reference Material**

Fragrance: Lorenzo/Symrise

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

**SAFE HANDLING INFORMATION**

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Leave-in Conditioner: Fresh Effect

### ATTRIBUTES

- Fresh effect

### DOW CORNING® BRAND PRODUCTS

- *Dow Corning*® 5-7113 Silicone Quat Microemulsion

### XIAMETER® BRAND PRODUCTS

- XIAMETER® OFX-0193 Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Fragrance	2	
2. Solubilizer (choice)	2	
<b>Phase B</b>		
3. Water	84.5	
<b>Phase C</b>		
4. Butylene Glycol	5	1,3-Butylene Glycol/No Supplier Specified
5. Silicone Quaternium-16 (and) Undeceth-11 (and) Butyloctanol (and) Undeceth-5	4	<i>Dow Corning</i> ® 5-7113 Silicone Quat Microemulsion
6. Preservative (choice)	0.5	
7. Green 3	q.s.	FD&C Green 6524/Sensient
8. PEG-12 Dimethicone	2	XIAMETER® OFX-0193 Fluid

### Procedure

1. Combine phase A ingredients and mix.
2. Add phase B to phase A with mixing.
3. Add phase C with mixing.

### Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

### Stability

Stability data for this formulation has not been established.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

### SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Styling Mousse: Color Protection, Heat Protection, Strengthening

### ATTRIBUTES

- Enhanced body
- Nontacky
- Smoothness
- Soft feel
- Color protection
- Heat protection
- Strengthening

### DOW CORNING® BRAND PRODUCTS

- *Dow Corning*® 5-7113 Silicone Quat Microemulsion

### XIAMETER® BRAND PRODUCTS

- XIAMETER® OFX-0193 Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Solubilizer (choice)	2	
2. Fragrance	0.5	
<b>Phase B</b>		
3. Water	83	
<b>Phase C</b>		
4. Cocamide DEA	2	
5. PVP/VA Copolymer	5	
6. Silicone Quaternium-16 (and) Undeceth-11 (and) Butyloctanol (and) Undeceth-5	4	<i>Dow Corning</i> ® 5-7113 Silicone Quat Microemulsion
7. Preservative (choice)	0.5	
8. Cocamidopropyl Betaine	2	Dehyton/Cognis Corporation, Care Chemicals
9. PEG-12 Dimethicone	1	XIAMETER® OFX-0193 Fluid

### Procedure

1. Combine phase A ingredients and mix.
2. Add phase B to phase A with mixing.
3. Add phase C with mixing.

### Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

### Stability

Stability data for this formulation has not been established.

### External Reference Material

Fragrance: Spring Fresh 53312/Mane

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

#### SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.



## Hair Spray: Shake Before Use; Two Phases – Milky and Clear

### ATTRIBUTES

- Shake before use
- Two phases – milky and clear

### DOW CORNING® BRAND PRODUCTS

- *Dow Corning*® 556 Fluid
- *Dow Corning*® 8500 Conditioning Agent
- *Dow Corning*® ES-5227 DM Formulation Aid

### XIAMETER® BRAND PRODUCTS

- XIAMETER® OFX-0193 Fluid
- XIAMETER® PMX-0345 Cyclosiloxane Blend
- XIAMETER® PMX-1502 Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. C11-C13 Isoparaffin (and) Dimethiconol (and) Isohexadecane (and) Dimethicone	3	XIAMETER® PMX-1502 Fluid
2. Cyclopentasiloxane (and) Cyclohexasiloxane	4	XIAMETER® PMX-0345 Cyclosiloxane Blend
3. Phenyl Trimethicone	0.9	<i>Dow Corning</i> ® 556 Fluid
4. Bis (C13-15 Alkoxy) PG Amodimethicone	0.4	<i>Dow Corning</i> ® 8500 Conditioning Agent
5. Polysorbate 20	1	
6. Dimethicone (and) PEG/PPG-18/18 Dimethicone	0.4	<i>Dow Corning</i> ® ES-5227 DM Formulation Aid
<b>Phase B</b>		
7. Water	84.8	
8. Propylene Glycol	3	
9. Polyquaternium-7	1	
10. Sodium Chloride	0.2	
11. PEG-12 Dimethicone	0.5	XIAMETER® OFX-0193 Fluid
12. Hydrolyzed Vegetable Protein PG-Propyl Silanetriol	0.5	Keravis/Croda
13. Preservative (choice)	0.3	

### Procedure

1. Mix phase A ingredients in order listed.
2. Mix phase B ingredients together until all ingredients are completely dissolved.
3. Add phase B to phase A with mixing.
4. Continue mixing for an additional 5 minutes.
5. Adjust pH with citric acid, if necessary.

### Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

### Stability

Stable for at least 2 months at room temperature and 40°C. Passes 3 freeze-thaw cycles.

### External Reference Material

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

### SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Hair After Sun: Cuticle Coat – Color Protection, Hair Serum Gel, Heat Protection

### ATTRIBUTES

- Condition damaged hair
- Could be packed in a clear capsule
- Excellent dry softness and smoothness
- Improved wet and dry combing
- Shine
- Color protection
- Hair serum gel
- Heat protection

### DOW CORNING® BRAND PRODUCTS

- *Dow Corning*® 2-8566 Amino Fluid

### XIAMETER® BRAND PRODUCTS

- XIAMETER® PMX-0245 Cyclopentasiloxane
- XIAMETER® PMX-1501 Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Cyclopentasiloxane (and) Dimethiconol	67.5	XIAMETER® PMX-1501 Fluid
2. Cyclopentasiloxane	28	XIAMETER® PMX-0245 Cyclopentasiloxane
3. Amodimethicone	2	<i>Dow Corning</i> ® 2-8566 Amino Fluid
4. Passiflora Edulis Seed Oil (Maracuja Oil)	2.5	Passion Fruit Oil/Beraca-Grupo Sabara

### Procedure

1. Mix until uniform.

### Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

### Stability

Stable for at least 2 months at 45°C.

### External Reference Material

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

### SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

Leave-on Conditioner: Cuticle Coat – Anhydrous, Clear

**ATTRIBUTES**

- Anhydrous
- Clear

**DOW CORNING® BRAND PRODUCTS**

- *Dow Corning®* 8500 Conditioning Agent

**XIAMETER® BRAND PRODUCTS**

- XIAMETER® PMX-1502 Fluid
- XIAMETER® PMX-200 Silicone Fluid, 2 cSt

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. C11-C13 Isoparaffin (and) Dimethiconol (and) Isohexadecane (and) Dimethicone	65	XIAMETER® PMX-1502 Fluid
2. Dimethicone	33	XIAMETER® PMX-200 Silicone Fluid, 2 cSt
3. Bis (C13-15 Alkoxy) PG Amodimethicone	2	<i>Dow Corning®</i> 8500 Conditioning Agent

**Procedure**

1. Mix ingredients of phase A together until homogeneous.

**Variations**

Alternative *Dow Corning®* or XIAMETER® products have not been tested as of this printing.

**Stability**

Stable for at least 1 month at room temperature.

**External Reference Material**

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

**SAFE HANDLING INFORMATION**

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
 XIAMETER is a registered trademark of Dow Corning Corporation.  
 All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Two-Layer Silk & Milk Leave-in Conditioner: Ease of Combing, Nongreasy, Silky Smooth

### ATTRIBUTES

- Shake before use
- Ease of combing
- Nongreasy
- Silky smooth

### DOW CORNING® BRAND PRODUCTS

- *Dow Corning*® 2-2078 Fluid
- *Dow Corning*® 9509 Silicone Elastomer Suspension

### XIAMETER® BRAND PRODUCTS

- XIAMETER® MEM-0939 Emulsion
- XIAMETER® PMX-3021 Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Panthenol	0.3	
2. Water	q.s.	
3. Glycerin	1	
4. Cetrimonium Chloride	3	
5. Polyquaternium-11	0.3	
6. Cocamide MEA	0.5	Incromide CMEA-PW-(AP)/Croda
7. Dimethicone/Vinyl Dimethicone Crosspolymer (and) C12-14 Pareth-12	10	<i>Dow Corning</i> ® 9509 Silicone Elastomer Suspension
8. Amodimethicone (and) Trideceth-12 (and) Cetrimonium Chloride	5	XIAMETER® MEM-0939 Emulsion
9. Methylchloroisothiazolinone (and) Methylisothiazolinone	0.1	Kathon CG/The Dow Chemical Company
<b>Phase B</b>		
10. Propylene Glycol	2	Propylene Glycol/The Dow Chemical Company
11. Perfume (choice)	0.4	
<b>Phase C</b>		
12. Aminopropyl Phenyl Trimethicone	0.5	<i>Dow Corning</i> ® 2-2078 Fluid
13. Cyclopentasiloxane (and) Dimethiconol (and) Dimethicone Crosspolymer (and) Phenyltrimethicone	1	XIAMETER® PMX-3021 Fluid

### Procedure

1. Mix ingredients of phase A together until homogeneous.
2. Mix ingredients of phase B together.
3. Add phase B to phase A with mixing.
4. Mix phase C and add to phase AB.
5. Mix until a homogeneous solution is obtained.

### Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

### Stability

Stability data for this formulation has not been established.

### External Reference Material

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

#### SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Two-Layer Crystal Hair Shine Leave-in Conditioner: Ease of Combing, Gloss, Shine

### ATTRIBUTES

- Two-layer hair shine leave-in conditioner
- Detangling
- Shake before use
- Silky smooth after-feel
- Ease of combing
- Gloss
- Shine

### DOW CORNING® BRAND PRODUCTS

- *Dow Corning*® 556 Fluid

### XIAMETER® BRAND PRODUCTS

- XIAMETER® PMX-3021 Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Water	5	
2. Glycerin	5	
3. Propylene Glycol	5	
4. Methylchloroisothiazolinone (and) Methylisothiazolinone	0.05	Kathon CG/The Dow Chemical Company
<b>Phase B</b>		
5. Cyclopentasiloxane (and) Dimethiconol (and) Dimethicone Crosspolymer (and) Phenyltrimethicone	33	XIAMETER® PMX-3021 Fluid
6. Phenyl Trimethicone	3	<i>Dow Corning</i> ® 556 Fluid
7. Light Mineral Oil	7	
8. Macadamia Ternifolia Seed Oil	3	Macadamia Seed Oil - Ultra Refined/Biochemica
9. Perfume (choice)	q.s.	

### Procedure

1. Mix phase A ingredients until homogeneous.
2. Mix phase B ingredients until homogeneous.
3. Add phase B into phase A and mix together until homogeneous.

### Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

### Stability

Stability data for this formulation has not been established.

### External Reference Material

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

### SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Rinse-off Conditioner: Colored and Permed Hair

## ATTRIBUTES

- High conditioning
- Colored and permed hair

## XIAMETER® BRAND PRODUCTS

- XIAMETER® MEM-0949 Emulsion

## Procedure

1. Heat water for phase A to about 75°C.
2. Disperse ingredient 2 into water.
3. Mix until well dispersed.
4. Heat phase B ingredients to 80°C with gentle mixing until completely melted.
5. Add phase B to phase A with mixing.
6. Cool to approximately 40°C with stirring.
7. Add phase C ingredients, mixing well after each addition.
8. Mix phase D ingredients together.
9. Add phase D with mixing.
10. Add phase E ingredients one at a time to the batch and homogenize.

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Water	90.45	
2. Hydroxyethylcellulose	1	Natrosol Plus 330 CS/Hercules Inc.
<b>Phase B</b>		
3. Cetrimonium Chloride	0.5	Arquad 16-29/Akzo Nobel Chemicals, Inc.
4. Cetearyl Alcohol	1.5	Crodacol CS 90 EP/Croda Chemicals Europe, Ltd.
5. Glyceryl Stearate (and) PEG-100 Stearate	0.7	Simulsol 165/Seppic S.A.
<b>Phase C</b>		
6. Amodimethicone (and) Trideceth-12 (and) Cetrimonium Chloride	4	XIAMETER® MEM-0949 Emulsion
7. Hydrolyzed Wheat Protein PG-Propyl Silanetriol	0.5	Crodasone W/Croda Chemicals Europe, Ltd.
8. Panthenol	0.5	D-Panthenol USP/BASF Corporation
<b>Phase D</b>		
9. Benzophenone-3	0.1	Escalol 567/ISP
10. Ethylhexyl Methoxycinnamate	0.2	Parsol MCX/DSM Nutritional Products
<b>Phase E</b>		
11. DMDM Hydantoin	0.2	Glydant 2000/Lonza
12. Citric Acid 50% Solution	0.05	No Trade Name Specified/No Supplier Specified
13. Perfume	0.3	

## Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

## Stability

Stable for 6 months at room temperature and 3 months at 40°C.

## External Reference Material

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

## SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Rinse-off Conditioner: Enhanced Dry Combing, Enhanced Wet Combing

## ATTRIBUTES

- Enhanced body/volume
- Enhanced dry combing
- Enhanced wet combing

## XIAMETER® BRAND PRODUCTS

- XIAMETER® MEM-0949 Emulsion

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Deionized Water	90.54	
2. Hydroxyethylcellulose	1.5	Natrosol 250 HHR/Hercules Inc.
<b>Phase B</b>		
3. Cetearyl Alcohol	1	Lanette O/BASF Care Chemicals (Cognis Corporation)
4. Glyceryl Stearate (and) PEG-100 Stearate	1	Arlacel 165/Croda
<b>Phase C</b>		
5. Amodimethicone (and) Trideceth-12 (and) Cetrimonium Chloride	5.56	XIAMETER® MEM-0949 Emulsion
<b>Phase D</b>		
6. DMDM Hydantoin	0.4	Glydant/Lonza

## Procedure

1. Mix ingredients of phase A together.
2. Heat to 60°C to 70°C.
3. Add phase B with mixing.
4. Mix until melted.
5. Cool to 40°C.
6. Add ingredient 5.
7. Mix until uniform.
8. Add ingredient 6.
9. Mix until uniform.
10. Compensate for the water loss due to heating.

## Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

## Stability

Stable for at least 6 months at room temperature.

## External Reference Material

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

## SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Intensive Conditioner: Rinse-off Conditioner – Enhanced Dry Combing, Enhanced Wet Combing

**ATTRIBUTES**

- Soft feel/conditioning – dry
- Enhanced dry combing
- Enhanced wet combing

**XIAMETER® BRAND PRODUCTS**

- XIAMETER® MEM-1785 Emulsion

**Procedure**

1. Mix ingredients of phase A together.
2. Heat to 75°C.
3. Add phase B with mixing.
4. Begin cooling.
5. Add phase C with mixing.
6. Cool to 50°C.
7. Add phase D and mix.
8. Cool to room temperature.
9. Add ingredient 10.
10. Add deionized water to compensate for water loss during heating phase.

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Deionized Water	79.47	
2. Hydroxyethylcellulose	1.5	Natrosol 250 HHR/Hercules Inc.
3. Cetrimonium Chloride	0.7	Arquad 16-29/Akzo Nobel Chemicals, Inc.
<b>Phase B</b>		
4. Cetearyl Alcohol	4	Lanette O/BASF Care Chemicals (Cognis Corporation)
5. Glyceryl Stearate (and) PEG-100 Stearate	1	Arlacel 165/Croda
<b>Phase C</b>		
6. Propylene Glycol	4	Propylene Glycol USP/FCC/ Fisher Chemical Company
7. Glycerin	4	Glycerin/Fisher Chemical Company
<b>Phase D</b>		
8. Hydrolyzed Wheat Gluten	1	Gludain W20/BASF Care Chemicals (Cognis Corporation)
9. Propylene Glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben	1	Germaben II/ISP
<b>Phase E</b>		
10. Dimethiconol (and) TEA-Dodecylbenzenesulfonate	3.33	XIAMETER® MEM-1785 Emulsion

**Variations**

XIAMETER® MEM-1785 Emulsion can be replaced with *Dow Corning®* 5-7113 Silicone Quat Microemulsion.

**Stability**

Stable for at least 2 months at room temperature and 40°C. Passes 5 freeze-thaw cycles.

**External Reference Material**

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

**SAFE HANDLING INFORMATION**

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.



## Clear Shampoo: Normal to Greasy Hair

## ATTRIBUTES

- Clear
- Enhanced wet combing
- Light conditioning
- Normal to greasy hair

## XIAMETER® BRAND PRODUCTS

- XIAMETER® OFX-5330 Fluid

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Water	46.15	
2. Sodium Laureth Sulfate (30%)	35	Empicol ESB 3/Albright & Wilson
3. Cocamidopropyl Betaine	6	Amony 380BA/Seppic S.A.
<b>Phase B</b>		
4. Guar Hydroxypropyltrimonium Chloride	0.15	Jaguar C-162/Rhodia, Inc.
5. Hydrolyzed Wheat Protein (and) Hydrolyzed Wheat Starch	1	Cropeptide W/Croda Chemicals Europe, Ltd.
6. Panthenol	0.3	D-Panthenol USP/BASF Corporation
7. Water	5	
<b>Phase C</b>		
8. Green Tea Extract	0.5	Extrapon Green Tea GW/Symrise
9. PEG/PPG-15/15 Dimethicone	1	XIAMETER® OFX-5330 Fluid
10. DMDM Hydantoin	0.2	Glydant 2000/Lonza
11. Laureth-2	2.5	Dehydol LS 2/BASF Care Chemicals (Cognis Corporation)
12. PEG-150 Pentaerythrityl Tetrastearate (and) PEG-6 Caprylic/Capric Glycerides (and) Water	1.7	Crothix Liquid/Croda
13. Perfume (choice)	0.5	

## Procedure

1. Mix phase A ingredients until homogeneous.
2. Mix phase B ingredients together and add to phase A with mixing.
3. Add phase C ingredients one at a time in order with mixing.

## Variations

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

## Stability

Stable for 6 months at room temperature and 3 months at 40°C.

## External Reference Material

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

## SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Shampoo: Clear, Extra Shine, Mild Conditioning

## ATTRIBUTES

- Enhanced dry combing
- Enhanced wet combing
- Smooth feel
- Clear
- Extra shine
- Mild conditioning

## XIAMETER® BRAND PRODUCTS

- XIAMETER® OFX-5330 Fluid

## Procedure

1. Combine phase A ingredients in order.
2. Heat phase A ingredients to 70-75°C.
3. Heat ingredient 5 to 60°C; add ingredient 4 while gently mixing.
4. Add phase B to phase A with gentle mixing.
5. Add phase C to AB with gentle mixing.
6. In an appropriate vessel, melt ingredient 7 in a hot water bath.
7. Add blend ABC to phase D with mixing.
8. Add phase E.
9. Mix until a homogeneous solution is obtained.
10. Cool to room temperature.
11. Adjust viscosity with sodium chloride, if necessary.
12. Adjust pH to 5.5 with citric acid, if necessary.

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Sodium Laureth Sulfate	30	Empicol ESB 3/Albright & Wilson
2. Cocamidopropyl Betaine	4	Amony 380BA/Seppic S.A.
3. Deionized Water	to 100	
<b>Phase B</b>		
4. Polyquaternium-10	0.1	Ucare Polymer JR-400/Amerchol Corporation
5. Deionized Water	10	
<b>Phase C</b>		
6. PEG-150 Pentaerythrityl Tetrastearate	2	Crothix/Croda
<b>Phase D</b>		
7. Cocamide MIPA	2	Rewomid IPP 240/Goldschmidt
<b>Phase E</b>		
8. PEG/PPG-15/15 Dimethicone	2	XIAMETER® OFX-5330 Fluid
<b>Phase F</b>		
9. Sodium Chloride	q.s.	Sodium Chloride/Fisher Scientific
10. Citric Acid	q.s.	

## Variations

XIAMETER® OFX-5330 Fluid can be replaced with XIAMETER® OFX-5324 Fluid.

## Stability

Stable for 6 months at room temperature and 3 months at 40°C.

## External Reference Material

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

## SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

Dow Corning is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Clear Shampoo: Colored and Permed Hair

## ATTRIBUTES

- Clear
- Medium conditioning
- Colored and permed hair

## XIAMETER® BRAND PRODUCTS

- XIAMETER® MEM-8177 Emulsion

Ingredient	Wt. %	Trade Name/Supplier
<b>Phase A</b>		
1. Water	29.9	
2. Sodium Laureth Sulfate (30%)	35	Empicol ESB 3/Albright & Wilson
3. Ammonium Lauryl Sulfate	15	Standapol A/BASF Care Chemicals (Cognis Corporation)
4. Cocamidopropyl Betaine	6	Amony 380BA/Seppic S.A.
<b>Phase B</b>		
5. Hydrolyzed Wheat Protein (and) Hydrolyzed Wheat Starch	1	Cropeptide W/Croda Chemicals Europe, Ltd.
6. Panthenol	0.3	D-Panthenol USP/BASF Corporation
7. Benzophenone-4	0.1	Uvinul MS 40/BASF Corporation
8. Water	5	
<b>Phase C</b>		
9. Amodimethicone (and) C12-14 Sec-Pareth-7 (and) C12-14 Sec-Pareth-5	5	XIAMETER® MEM-8177 Emulsion
10. DMDM Hydantoin	0.2	Glydant 2000/Lonza
11. Laureth-2	2	Dehydol LS 2/BASF Care Chemicals (Cognis Corporation)
12. PEG-150 Pentaerythrityl Tetrastearate (and) PEG-6 Caprylic/Capric Glycerides (and) Water	0.5	Crothix Liquid/Croda
13. Perfume (choice)	0.5	

**Procedure**

1. Mix phase A ingredients until homogeneous.
2. Mix phase B ingredients together and add to phase A with mixing.
3. Add phase C ingredients one at a time, in order, with mixing.

**Variations**

Alternative *Dow Corning*® or XIAMETER® products have not been tested as of this printing.

**Stability**

Stable for 6 months at room temperature and 3 months at 40°C.

**External Reference Material**

No external references identified as of this printing.

This suggested formulation is only a representative formulation and it is not a commercialized product. Dow Corning believes that the information and data on which this formulation is based are reliable, but it has not been subjected to extensive testing for performance, efficacy or safety. BEFORE COMMERCIALIZATION, YOU SHOULD THOROUGHLY TEST THE FORMULATION OR ANY VARIATION OF IT TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY. IT IS YOUR RESPONSIBILITY TO OBTAIN ANY NECESSARY GOVERNMENT CLEARANCE, LICENSE OR REGISTRATION. In addition, Dow Corning has not undertaken a comprehensive patent search on the formulation. Suggestions of uses should not be taken as inducements to infringe any particular patent.

**SAFE HANDLING INFORMATION**

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. FOR THE MATERIAL SAFETY DATA SHEET PLEASE SEE OUR WEB SITE, DOWCORNING.COM, OR CONSULT YOUR LOCAL DOW CORNING REPRESENTATIVE.

*Dow Corning* is a registered trademark of Dow Corning Corporation.  
XIAMETER is a registered trademark of Dow Corning Corporation.  
All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

## Troubleshooting Suggestions for Typical Application Issues

Problem	Potential Solution	Suggested Products
<b>Viscosity drift</b>		
	Add silicones that can enhance viscosity drop, such as dimethicone copolyol	XIAMETER® OFX-0193 Fluid, XIAMETER® OFX-5324 Fluid, XIAMETER® OFX-5330 Fluid
	Add silicones that can enhance viscosity drop, such as amodimethicone	<i>Dow Corning®</i> 8500 Conditioning Agent
	Add silicones that can enhance viscosity drop, such as cyclomethicone	XIAMETER® PMX-0245 Cyclopentasiloxane, XIAMETER® PMX-0344 Cyclosiloxane Blend, XIAMETER® PMX-0345 Cyclosiloxane Blend
	Add a thickening agent	<b>Clear formulations:</b> PEG-150 Distearate; PEG-150 Pentaerythrityl Tetrastearate (Crothix™); PEG-120 Methyl Glucose Trioleate (Glucamate™ DOE-120); Polyquaternium-10+ CDEA+ Betaine, etc. <b>Opaque formulations:</b> Guar Gum
	Add more surfactant	SLES, CDEA, CAPB
<b>Separation</b>		
	Add suspending/thickening agent	<b>Clear formulations:</b> PEG-150 Distearate; PEG-150 Pentaerythrityl Tetrastearate (Crothix™); PEG-120 Methyl Glucose Trioleate (Glucamate™ DOE-120); Polyquaternium-10+ CDEA+ Betaine, etc. <b>Opaque formulations:</b> Guar Gum, Xanthan Gum, Carbomer, HEC (Hydroxyethylcellulose)
	Add more surfactant	SLES, CDEA, Betaine
<b>Shampoo clarity/haziness</b>		
	Add solubilizers	Polysorbate 20, PEG-40 Hydrogenated Castor Oil
	Add more surfactant	SLES, CDEA, Betaine
	Check mixing process	
<b>Excess foam in shampoo formulation during processing</b>		
	Control mixing process, speed of mixing (gentle mixing), level of puddle/blade, quantity and batch size	
	Add defoaming agent	<b>Silicone antifoam:</b> XIAMETER® AFE-1520 Antifoam Emulsion, XIAMETER® AFE-1430 Antifoam Emulsion <b>Alcohol:</b> Ethanol, IPA


The recommendations contained herein are offered in good faith and are believed to be accurate. Because, however, conditions and methods of use of our products are beyond our control, these recommendations should not be used in substitution for your tests to ensure that these recommendations are safe, effective and fully satisfactory for the intended end use. DOW CORNING SPECIFICALLY DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.



Problem	Potential Solution	Suggested Products
<b>Need to increase viscosity of leave-in conditioner in anhydrous system</b>		
	Add more silicone gum blend	XIAMETER® PMX-1501 Fluid, XIAMETER® PMX-1411 Fluid
	Add more silicone elastomer blend	<i>Dow Corning</i> ® 9040 Silicone Elastomer Blend, <i>Dow Corning</i> ® 9045 Silicone Elastomer Blend, <i>Dow Corning</i> ® 9546 Silicone Elastomer Blend
	Add more high-molecular-weight dimethicone fluid	XIAMETER® PMX-200 Silicone Fluid, 5,000 cSt; XIAMETER® PMX-200 Silicone Fluid, 12,500 cSt; XIAMETER® PMX-200 Silicone Fluid, 60,000 cSt
<b>Need to reduce viscosity of leave-in conditioner in anhydrous system</b>		
	Add more cyclomethicone	XIAMETER® PMX-0245 Cyclopentasiloxane, XIAMETER® PMX-0344 Cyclosiloxane Blend, XIAMETER® PMX-0345 Cyclosiloxane Blend
	Add more organic, alkyl silicone	<i>Dow Corning</i> ® 556 Cosmetic Grade Fluid, <i>Dow Corning</i> ® 2502 Cosmetic Fluid
	Add more low-molecular-weight dimethicone fluid	XIAMETER® PMX-200 Silicone Fluid, 0.65 cSt; XIAMETER® PMX-200 Silicone Fluid, 10 cSt; XIAMETER® PMX-200 Silicone Fluid, 20 cSt; XIAMETER® PMX-200 Silicone Fluid, 50 cSt
<b>Need to improve haziness of leave-in conditioner in anhydrous system</b>		
	Add more cyclomethicone	XIAMETER® PMX-0245 Cyclopentasiloxane, XIAMETER® PMX-0344 Cyclosiloxane Blend, XIAMETER® PMX-0345 Cyclosiloxane Blend
	Add more organic, alkyl silicone	<i>Dow Corning</i> ® 556 Cosmetic Grade Fluid, <i>Dow Corning</i> ® 2502 Cosmetic Fluid
	Add oil solubilizers	C12-15 Alkyl Benzoate
	Change perfume	
<b>Need silicone options for formulating clear sprays</b>		
	Try silicone polyethers – water-soluble, not as long-lasting	XIAMETER® OFX-0193 Fluid (good wet combing), XIAMETER® OFX-5330 Fluid (extra shine)
	Try amino silicone polymers – water-dispersible, longer-lasting	XIAMETER® MEM-8177 Emulsion, <i>Dow Corning</i> ® 5-7113 Silicone Quat Microemulsion

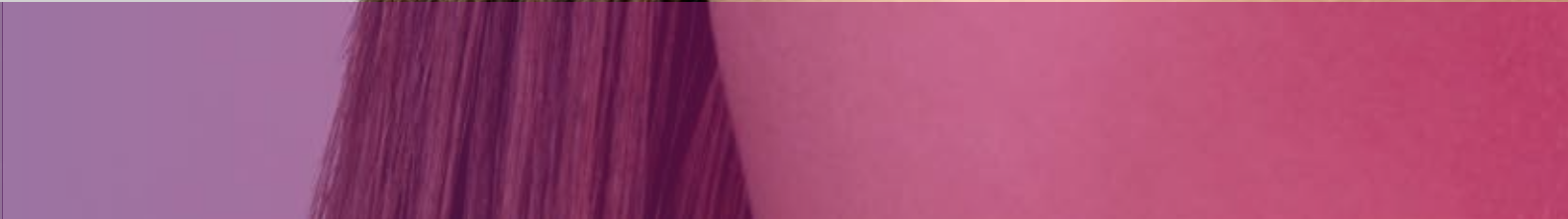
The recommendations contained herein are offered in good faith and are believed to be accurate. Because, however, conditions and methods of use of our products are beyond our control, these recommendations should not be used in substitution for your tests to ensure that these recommendations are safe, effective and fully satisfactory for the intended end use. DOW CORNING SPECIFICALLY DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

## Troubleshooting Suggestions for Typical Application Issues (continued)

Problem	Potential Solution	Suggested Products
Need to maximize deposition of silicone	<p>Silicone deposition is influenced by particle size, charge density, surfactant matrix, stabilizing matrix and silicone type. Choose silicone polymers possessing deposition effects that align with your needs.</p>	<p>Typical deposition effects of various silicone polymer types – from higher to lower.</p> <div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 10px;"> <p><b>Higher</b></p>  <p><b>Lower</b></p> </div> <div> <ul style="list-style-type: none"> <li>Aminofunctional – high amine content;</li> <li>Aminofunctional – low amine content;</li> <li>Dimethicone – high molecular weight, cationic;</li> <li>Dimethicone – with siloxysilicate resins;</li> <li>Dimethicone – low molecular weight, nonionic;</li> <li>Dimethicone copolyol</li> </ul> </div> </div>

The recommendations contained herein are offered in good faith and are believed to be accurate. Because, however, conditions and methods of use of our products are beyond our control, these recommendations should not be used in substitution for your tests to ensure that these recommendations are safe, effective and fully satisfactory for the intended end use. DOW CORNING SPECIFICALLY DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.





## About the XIAMETER® brand from Dow Corning

The XIAMETER® brand offers high-quality, standard silicone materials at market-based prices. You receive the reliable quality, supply and delivery of Dow Corning, with an extra measure of ordering ease, flexible options and Web-enabled convenience. XIAMETER® brand products may be purchased online or through a global network of experienced silicone distributors.

## For more information

To learn more about the many product options available to you from the XIAMETER® brand or to find a distributor, visit [www.xiameter.com](http://www.xiameter.com).

Information about *Dow Corning*® brand specialty silicone materials and service options is available at [www.dowcorning.com](http://www.dowcorning.com).

Images: AV19673, AV18622, AV15484.

### HANDLING PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT [DOWCORNING.COM](http://DOWCORNING.COM), OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

### LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

**DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.**

**DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

XIAMETER is a registered trademark of Dow Corning Corporation.

*Dow Corning* is a registered trademark of Dow Corning Corporation.

All other trademarks or trade names are the property of their respective owners.

©2013 Dow Corning Corporation. All rights reserved.

Printed in USA

AGP12860

Form No. 95-1176-01

