

Interpolymer offers
several suggested formulations for
Syntran[®] PC 5100 for Skin Care Products.

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SKIN CARE

- Super Intensive Moisturizing Crème F-24-49
- Skin Firming Serum F-24-55 **
- Intensive Moisturizing Crème F-24-102 **
- Fast Drying Skin Firming Serum F-24-115
- Skin Firming Moisturizing Crème F-24-131
- Skin Tightening Anti Aging Serum F-24-173 **
- Shimmering Body Lotion F-26-01 **

** Samples readily available

SUPER INTENSIVE MOISTURIZING CRÈME WITH SYNTRAN® PC 5100

“Cold Cream” like texture moisturizing crème provides quick rub-in, elegant skin feel and lubricity. Non-greasy formula with no residual tackiness. Instantly makes dry skin more supple and hydrated. Unique film-forming properties of patented Bimodal polymer technology provided by **SYNTRAN® PC 5100** actually acts like shrink-wrap for the skin. Tightening and firming skin surface while holding actives and emollients to skin.

Formulation F-24-49

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1 —Heat to 75°C		
Distilled Water	Water	61.60
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.10
Glycerin	Glycerin	4.00
Phase A-2 – Add at 75°C		
Phenoxytol (Clariant)	Phenoxyethanol	1.00
Structure 3001 (National Starch)	Acrylates/Ceteth-20 Itaconate Copolymer	2.00
SYNTRAN® PC 5100	Polyacrylate-21, Acrylates/ Dimethylaminoethyl Methacrylate copolymer	8.00
Phase B—Add at 75°C		
Lipomulse 165 (LIPO)	Glyceryl Stearate, PEG-100 Stearate	3.00
Petrolaum Snow White (Penreco)	Petrolatum	4.00
Cetyl Alcohol (Protameen)	Cetyl Alcohol	2.00
Finsolv G-2 (Finetex)	C15-17 Alkyl Benzoate	1.00
Protachem ISP (Protameen)	Isostearyl Palmitate	1.00
Ceraphyl 368 (ISP)	Ethylhexyl Palmitate	3.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.20
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Super Steol Liquid (Croda)	C10-30 Cholesterol/Lanosterol Esters	1.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	0.60
TEA 99%	Triethanolamine	0.30
Phase C—Add at 55°C		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	3.00
DC 200 Fluid 200 cst (Dow Corning)	Dimethicone	3.00
Phase D—Add at 45°C		
Fragrance	Fragrance	0.20
	YIELD:	100.00

Procedure

Combine Phase A-1 ingredients and begin heating to 75° C. At 75°C individually add each Phase A-2 ingredient. Stir until homogeneous. In a separate vessel add all Phase B ingredients and heat to 75°C. Add Phase B to Phase A @ 75°C. Cool batch to 55°C, add Phase C ingredients. Homomix batch until uniform. Cool batch to 45°C add Phase D. Adjust pH to 7.0 - 7.5.

ANTI-WRINKLE EYE SERUM

Formulation F-24-55

Unique film-forming properties of patented bimodal polymer technology provided by **SYNTRAN® PC 5100** actually acts like shrink-wrap for the skin. Instantly eliminates fine lines and crows-feet around eyes.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A—Heat to 35°C		
Deionized Water	Water	72.40
Butylene Glycol	Butylene Glycol	2.00
Structure XL (National Starch)	Hydroxypropyl Starch Phosphate	5.00
Phase B – Add at 35°C		
SYNTRAN® PC 5100	Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer	20.00
Phase C—Add at 35°C		
Mackstat DM (McIntyre)	DMDM Hydantoin	0.40
0.10% Ext. Violet # 2 (LCW)	Ext. Violet 2	0.20
	YIELD:	100.00

Procedure

Combine Phase A-1 ingredients and begin heating to 30-35° C. Batch will thicken, adjust stirring to avoid aeration. Continue stirring until Structure XL is completely hydrated and a smooth, homogeneous mixture is obtained. Add **SYNTRAN® PC 5100** and stir until smooth and homogeneous. Add Phase C ingredients and stir until smooth and homogeneous. Adjust pH to 7-8.

05/07

INTENSIVE MOISTURIZING CRÈME
Formulation F-24-102

Intensive moisturizing crème provides quick rub-in, elegant skin feel and lubricity. Non-greasy formula with no residual tackiness. Instantly makes dry skin more supple and hydrated. Unique film-forming properties of patented Bimodal polymer technology provided by **SYNTRAN® PC 5100**. Tightens and firms skin surface while holding actives and emollients to skin.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1 —Heat to 75°C		
Distilled Water	Water	63.00
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.10
Ultrez 21 (Noveon)	Acrylates/C10-30 Alkyl Acrylates Crosspolymer	0.40
Phase A-2		
Glycerin 99.7%	Glycerin	4.00
Ticaxan Xanthan NF (TIC Gum)	Xanthan Gum	0.25
Phase A-3		
Optiphen (ISP)	Phenoxyethanol, Caprylyl Glycol	1.00
Phase B—Add at 75°C		
Lipomulse 165 (LIPO)	Glyceryl Stearate, PEG-100 Stearate	3.00
Petrolaum Snow White (Penreco)	Petrolatum	3.00
Cetyl Alcohol (Protameen)	Cetyl Alcohol	3.00
Finsolv G-2 (Finetex)	C15-17 Alkyl Benzoate	1.00
Protachem ISP (Protameen)	Isostearyl Palmitate	1.00
Ceraphyl 368 (ISP)	Ethylhexyl Palmitate	3.00
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Super Steol Liquid (Croda)	C10-30 Cholesterol/Lanosterol Esters	1.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	0.60
Phase C—Add at 55-60°C		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	3.00
DC 200 Fluid 200 cst (Dow Corning)	Dimethicone	3.00
Phase D—Add at 55-60°C		
TEA 99%	Triethanolamine	0.45
SYNTRAN® PC 5100	Polyacrylate-21, Acrylates/ Dimethylaminoethyl Methacrylate Copolymer	8.00
Phase E—Add at 45°C		
Fragrance	Fragrance	0.20
	YIELD:	100.00

Procedure

Combine Phase A-1 ingredients and begin heating to 75°C. Stir until Ultrez is hydrated. Premix Phase A-2 and add to A-1. Batch will thicken, adjust stirring to avoid aeration. At 75°C add Phase A-3. In a separate vessel add all ingredients in Phase B, heat to 75°C until melted. Add Phase B to Phase A @ 75°C. Cool to 55-60°C. Individually add Phase C ingredients at 55-60°C. Homomix. Individually add Phase D and stir until batch thickens and is homogeneous. Cool slowly to 45°C, add Phase E. Adjust pH to 5.5-6.0 with TEA, if necessary.

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FAST DRYING SKIN-FIRMING SERUM

The fast drying and skin firming attributes of this formula are achieved via a unique and patented film-forming bimodal polymer technology. During formula evaporation the polymer ionically bonds forming an interpenetrating network which imparts a shrink-wrap like effect, tightening and firming the skin.

Formulation F-24-115

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1 —Heat to 35°C		
Distilled Water	Water	64.30
SDA 40B (190 proof)	Alcohol Denatured	10.00
Structure XL (National Starch)	Hydroxypropyl Starch Phosphate	5.00
Phase A-2 – Add at 35°C		
SYNTRAN® PC 5100	Polyacrylate-21, Acrylates/ Dimethylaminoethyl Methacrylate copolymer	20.00
Phase B—Add at 30°C		
Mackstat DM	DMDM Hydantoin	0.40
0.10% Ext. Green #5	Green 5	0.20
Fragrance	Fragrance	0.10
	YIELD:	<u>100.00</u>

Procedure

Combine Phase A-1 ingredients and begin heating to 35° C. Batch will thicken, adjust stirring to avoid aeration. Continue stirring until Structure XL is completely hydrated and a smooth, homogeneous mixture is obtained. Add **SYNTRAN® PC 5100** and stir until smooth and homogeneous. Cool batch to 30°C, add Phase B ingredients and stir until smooth and homogeneous.

Final pH to 7.5 +/- 0.5

SKIN-FIRMING MOISTURIZING CRÈME
Formulation F-24-131

Smooth textured moisturizing crème provides elegant skin feel and lubricity. Non-greasy formula with no residual tackiness. Instantly makes dry skin more supple and hydrated. Unique film-forming properties of patented bimodal polymer technology provided by **SYNTRAN® PC 5100** actually acts like shrink-wrap for the skin. Tightening and firming skin surface.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1 —Heat to 75°C		
Distilled Water	Water	64.95
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Phase A-2 – Add at 75°C		
Butylene Glycol	Butylene Glycol	3.00
Ticaxan Xanthan NF (TIC Gum)	Xanthan Gum	0.30
Phase A-3		
Microcare PHG (Actichem)	Phenoxyethanol, Caprylyl Glycol	1.00
SYNTRAN® PC 5100	Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer	8.00
Phase B—Add at 75°C		
Prolipid 141 (ISP)	Glyceryl Stearate, Behenyl Alcohol, Palmitic Acid	
	Stearic Acid, Lecithin, Lauryl Alcohol	
	Myristyl Alcohol, Cetyl Alcohol	4.00
Cetyl Alcohol (Protameen)	Cetyl Alcohol	1.00
Protachem CTG (Protameen)	Caprylic/Capric Triglyceride	2.00
Protachem ISP (Protameen)	Isostearyl Palmitate	3.00
Ceraphyl SLK (ISP)	Isodecyl Neopentanoate	3.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	0.50
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Structure XL (National Starch)	Hydroxypropyl Starch Phosphate	1.00
Phase C—Add at 55°C		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	6.00
DC 200 Fluid 350 cst (Dow Corning)	Dimethicone	1.00
Phase D—Add at 45°C		
Fragrance	Fragrance	0.20
	YIELD:	100.00%

Procedure

Combine Phase A-1 ingredients and begin heating to 45°C. Premix Phase A-2 and add to A-1 at 45°C. Batch will thicken, adjust stirring to avoid aeration. Continue heating main vessel to 75°C. At 75°C individually add Phase A-3 ingredients. Stir until smooth and homogeneous. In a separate vessel add all Phase B ingredients and heat to 75°C until melted. Add Phase B to Phase A @ 75°C. Cool batch to 55°C, add Phase C ingredients. Homomix batch until uniform. Cool batch to 45°C add Phase D. Adjust pH to 6.5 +/- 0.5

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SKIN TIGHTENING, ANTI-AGING SERUM

Formulation F-24-173

Unique film-forming properties of patented Bimodal polymer technology provided by **SYNTRAN® PC 5100** actually acts like shrink-wrap for the skin. Instantly tightens and firms skin surface. Vegeseryl HGP provides moisturizing, repair and cell stimulation, and regeneration for longer term anti-wrinkle and anti-aging benefits.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1 —Heat to 35°C		
Distilled Water	Water	66.35
SDA 40B (190 proof)	Alcohol Denatured	5.00
Butylene Glycol	Butylene Glycol	1.00
Structure XL (National Starch)	Hydroxypropyl Starch Phosphate	5.00
Phase A-2 – Add at 35°C		
SYNTRAN® PC 5100	Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer	20.00
Phase B—Add at 30°C		
Mackstat DM (McIntyre)	DMDM Hydantoin	0.40
Vegeseryl HGP LS 8572 B (Cognis)	Glycine Soja (Soybean) Protein	2.00
0.10% Ext. Violet #2	Ext. Violet 2	0.15
Fragrance	Fragrance	0.10
	YIELD:	100.00

Procedure

With high shear agitation, combine Phase A-1 ingredients and begin heating to 35°C. Batch will thicken, adjust stirring to avoid aeration. Continue stirring until Structure XL is completely hydrated and a homogeneous mixture is obtained. Add **SYNTRAN® PC 5100** and stir until smooth and homogeneous. Cool batch to 30°C, individually add Phase B ingredients and stir until smooth and homogeneous. Adjust pH to 7-8.

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SHIMMERING BODY LOTION
Formulation F-26-01

Shimmering body lotion containing patented bimodal polymer which creates a “breathable” film on skin with excellent adhesion. Smooth rub-in, dries quickly and easily removed with soap and water. Polymer film is clear, never flakes or peels. Excellent delivery system for holding actives or inert ingredients to skin.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1—Heat to 75°C		
Distilled Water	Water	72.85
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Phase A-2 – Add at 45°C		
Butylene Glycol	Butylene Glycol	3.00
Ticaxan Xanthan Gum NF (TIC Gum)	Xanthan Gum	0.60
Phase A-3—Add at 75°C		
SYNTRAN® PC 5100	Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer	10.00
Microcare PHG (Actichem)	Phenoxyethanol, Caprylyl Glycol	1.00
Phase B—Add at 75°C		
Procol CS-20 (Protameen)	Cetareth-20	0.30
Ceraphyl SLK (ISP)	Isodecyl Neopentanoate	2.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	1.00
Protachem ISP (Protameen)	Isostearyl Palmitate	1.00
Protachem CTG (Protameen)	Caprylic/Capric Triglyceride	1.00
Lipomulse 165 (LIPO)	Glyceryl Stearate, PEG-100 Stearate	1.00
Cetyl Alcohol	Cetyl Alcohol	0.50
Phase C—Add at 55°C		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	2.00
DC 200 Fluid 350 CST (Dow Corning)	Dimethicone	2.00
Phase D—Add at 45°C		
Timiron MP-149 (EMD)	Mica, Titanium Dioxide	0.75
Timiron MP-24 (EMD)	Mica, Titanium Dioxide, Iron Oxides	0.75
Fragrance	Fragrance	0.20
	YIELD:	100.00

Procedure

Combine Phase A-1 ingredients and begin heating to 45° C. Premix Phase A-2 and add to A-1 at 45°C. Batch will thicken, adjust stirring to avoid aeration. Continue heating to main vessel to 75°C. At 75°C, add Phase A-3 ingredients. Stir until smooth and homogeneous. In a separate vessel add all Phase B ingredients and heat to 75°C until melted. Add Phase B to Phase A @ 75°C. Cool batch to 55°C, individually add each Phase C ingredient, Homomix until batch is smooth and homogeneous. Cool batch to 45°C add Phase D. Adjust pH to 7.5 ± 0.5.

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