

Interpolymer offers
several suggested formulations for
Syntran[®] PC 5227.

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SUN CARE

- SPF 15 Skin and Sun Crème F-18-81
- SPF 15 Spray Gel Sunscreen F-24-02
- SPF 30 Skin and Sun Crème F-24-03
- SPF 45 Skin and Sun Crème F-24-07 **
- Low Viscosity SPF 15+ Crème F-24-26 **
- Low Viscosity SPF 15+ Crème F-24-27
- SPF 30 Skin and Sun Crème F-24-37 **
- SPF 30 Skin and Sun Crème F-24-38
- High SPF Lotion F-24-88
- Skin Moisturizer with SPF 20+ F-24-103
- Oil Free Skin Lotion with SPF 20+ F-24-160

SKIN CARE

- Moisturizing Crème F-24-39 **
- Skin Moisturizer with SPF 15 F-24-52 **

** Samples readily available

SPF 15 SKIN AND SUN CREME
Formulation F-18-81.5227

Economical w/o emulsion crème with novel polymer designed to boost organic UV absorbers to perform at a level of SPF 15. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Great for dry or chapped skin. Very low irritation potential.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A—Heat to 75°C		
Distilled Water	Water	61.32
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Propylene Glycol	Propylene Glycol	2.00
TEA 99%	Triethanolamine	0.10
Phase B—Add at 75°C		
Finsolv TN (Finetex)	C12-15 Alkyl Benzoate	3.00
Finsolv G-2 (Finetex)	C16-17 Alkyl Benzoate	9.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.20
Escalol 557 (ISP)	Ethylhexyl Methoxycinnamate	2.25
Escalol 567 (ISP)	Benzophenone-3	1.00
Escalol 587 (ISP)	Ethylhexyl Salicylate	1.00
Crodafos CES (Croda)	Cetearyl Alcohol (and) Ceteth-10 Phosphate (and) Dicapryl Phosphate	4.00
Cetearyl Alcohol 50/50(RITA)	Cetearyl Alcohol	4.00
Crodafos CS20 Acid (Croda)	Cetearyl Alcohol (and) Ceteth-20 Phosphate (and) Dicapryl Phosphate	1.33
Phase C—Add at 60°C		
SYNTRAN® PC 5227	Polyacrylate-15 (and) Polyacrylate-17	10.00
Phase D—Add at 45°C		
Liquid Germall Plus (ISP)	Diazolidinyl Urea, IPBC	0.60
Fragrance	Fragrance	0.15
	YIELD:	100.00

Procedure

Combine Phase A ingredients and heat to 75° C. Melt all ingredients in Phase B. Add Phase B to Phase A @ 75°C. Stir with high shear and cool. At 60°C add Phase C. At 45°C add Phase D. Adjust pH 6-7.

11/23/2005

SPF 15 SPRAY GEL SUNSCREEN
Formulation F-24-02.5227

Alcohol-free and **silicone-free** high SPF sunscreen spray gel. This simple yet elegant aqueous formula is the most economical *sprayable* sun protection product available today. Patented **SYNTRAN**[®] technology is proven to boost SPF requiring less organic sunscreen to achieve high SPF. Easy rub-in, non-whitening formula dries to invisible tack-free film.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A—Heat to 75°C		
Distilled Water	Water	73.15
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Butylene Glycol	Butylene Glycol	2.00
Structure 3001 (National Starch)	Acrylates/Ceteth-20 Itaconate Copolymer	2.35
Phase B—heat tot 75°C		
Protachem SMO (Protameen)	Sorbitan Oleate	0.50
Escalol 557 Octinoxate (ISP)	Ethylhexyl Methoxycinnamate	7.50
Escalol 567 Oxybenzone (ISP)	Benzophenone-3	3.00
Escalol 587 Octisalate (ISP)	Ethylhexyl Salicylate	3.00
Procol CS-20D (Protameen)	Cetearyl Alcohol,Cetereth-20	0.75
Phase C—Add at 55-60°C		
AMP-95 (Angus)	Amino Methyl Propanol	0.40
SYNTRAN[®] PC 5227	Polyacrylate-15 (and) Polyacrylate-17	7.00
Phase D—Add at 45°C		
Liquid Glydant Plus (Lonza)	DMDMH, IBPC	0.30
	YIELD:	100.00

Procedure

Combine Phase A ingredients and heat to 75° C. In a separate vessel, melt all ingredients in Phase B. Add Phase B to Phase A @ 75°C. Homomix until smooth and homogeneous. Cool to 55-60°C add AMP-95. Stir until product thickens. Add Syntran PC 5227, continue to stir until smooth and homogeneous. Cool to 45°C add Phase D. Continue to stir with side sweep until cool.

Adjust pH 8.00 – 8.60.

Viscosity: 200-800cps

4/2006

SPF 30 SKIN AND SUN CRÈME
Formulation F-24-3.5227

Economical oil and water emulsion crème with novel polymer designed to boost organic UV absorbers to perform at a level of SPF 30. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Great for dry or chapped skin. Low irritation potential.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A—Heat to 75°C		
Distilled Water	Water	64.13
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Butylene Glycol	Butylene Glycol	2.00
Structure 3001 (National Starch)	Acrylates/Ceteth-20 Itaconate Copolymer	2.00
Phase B—Add at 75°C		
Finsolv G-2 (Finetex)	C16-17 Alkyl Benzoate	3.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.20
Escalol 557 Octinoxate (ISP)	Ethylhexyl Methoxycinnamate	7.50
Escalol 567 Oxybenzone (ISP)	Benzophenone-3	3.00
Escalol 587 Octisalate (ISP)	Ethylhexyl Salicylate	3.00
Crodafos CES (Croda)	Cetearyl Alcohol (and) Ceteth-10 Phosphate (and) Dicetyl Phosphate	5.00
Cetyl Alcohol	Cetyl Alcohol	1.40
Stearyl Alcohol	Stearyl Alcohol	0.60
Phase C—Add at 50°C		
AMP-95 (Angus)	Amino Methyl Propanol	0.42
SYNTRAN® PC 5227	Polyacrylate-15 (and) Polyacrylate-17	7.00
Phase D—Add at 45°C		
Liquid Germall Plus (ISP)	Diazolidinyl Urea, IPBC	0.60
Fragrance	Fragrance	0.10
	YIELD:	100.00

Procedure

Combine Phase A ingredients and heat to 75° C. Melt all ingredients in Phase B. Add Phase B to Phase A @ 75°C. Stir with high shear and cool. At 50°C add Phase C. At 45°C add Phase D. Homomix until smooth and homogenous. Continue to stir with side sweep until cool.

Adjust pH 7.0-7.5.

4/2006

SPF 45 SKIN AND SUN CRÈME WITH TiO₂
Formulation F-24-07.5227

Water and oil emulsion crème with novel polymer designed to boost organic UV absorbers to perform at a level of SPF 45+. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Great for dry or chapped skin. Lower irritation potential.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A—Heat to 75°C		
Distilled Water	Water	56.62
Dissolvine Na ₂ S (Akzo Nobel)	Disodium EDTA	0.05
Butylene Glycol	Butylene Glycol	2.00
Structure 3001 (National Starch)	Acrylates/Ceteth-20 Itaconate Copolymer	2.00
Phase B—Add at 75°C		
Finsolv G-2 (Finetex)	C16-17 Alkyl Benzoate	3.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.20
Escalol 557 Octinoxate (ISP)	Ethylhexyl Methoxycinnamate	7.50
Escalol 567 Oxybenzone (ISP)	Benzophenone-3	5.00
Escalol 587 Octisalate (ISP)	Ethylhexyl Salicylate	5.00
Titanium Dioxide USP/FCC (Universal Preserv-a-chem)	TiO ₂	3.00
Crodafos CES (Croda)	Cetearyl Alcohol (and) Ceteth-10 Phosphate (and) Dicetyl Phosphate	5.00
Cetyl Alcohol	Cetyl Alcohol	1.40
Stearyl Alcohol	Stearyl Alcohol	0.60
Phase C—Add at 55°C		
AMP-95 (Angus)	Amino Methyl Propanol	0.42
SYNTRAN® PC 5227	Polyacrylate-15 (and) Polyacrylate-17	7.50
Phase D—Add at 45°C		
Liquid Germall Plus (ISP)	Diazolidinyl Urea, IPBC	0.60
Fragrance	Fragrance	0.10
	YIELD:	100.00

Procedure

Combine Phase A ingredients and heat to 75° C. Melt all ingredients in Phase B. Add Phase B to Phase A @ 75°C. Stir with high shear and cool. At 55°C add Phase C. At 45°C add Phase D. Homomix until smooth and homogenous. Continue to stir with side sweep until cool.

Adjust pH 6.0-7.0.

4/2006

LOW VISCOSITY SPF 15+ CRÈME

Formulation F-24-26

Low viscosity o/w emulsion crème with novel polymer designed to boost organic UV absorbers to perform at a level of SPF 15+. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Great for dry or chapped skin.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1 —Heat to 75°C		
Distilled Water	Water	59.95
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.10
Veegum Ultra (RT Vanderbilt)	Magnesium Aluminum Silicate	0.50
Phase A-2		
Butylene Glycol	Butylene Glycol	3.00
Ticaxan Xanthan NF (TIC Gum)	Xanthan Gum	0.50
Phase B—Add at 75°C		
Finsolv G-2 (Finetex)	C16-17 Alkyl Benzoate	2.00
Stearic Acid 3X	Stearic Acid	3.00
Escalol 557 (ISP)	Ethylhexyl Methoxycinnamate	7.50
Escalol 567 (ISP)	Benzophenone-3	3.00
Escalol 587 (ISP)	Ethylhexyl Salicylate	3.00
Lipo GMS 450 (Lipo)	Glyceryl Stearate	1.50
Ceraphyl 368 (ISP)	Ethylhexyl Palmitate	3.00
Cetyl Alcohol	Cetyl Alcohol	1.00
Stearyl Alcohol (Protameen)	Stearyl Alcohol	0.50
Phase C—Add at 75°C		
TEA 99%	Triethanolamine	1.00
Phase D—Add at 60°C		
SYNTRAN® PC 5227	Polyacrylate-15, Polyacrylate-17	10.00
Phase E—Add at 45°C		
Liquid Glydant Plus (Lonza)	DMDM Hydantoin, IPBC	0.35
Fragrance	Fragrance	0.10
	YIELD:	100.00

Procedure

Combine Phase A-1 ingredients and heat to 75° C. Stir for 10 minutes. Premix Phase A-2 and add to A-1. Batch will thicken, adjust stirring to avoid aeration. In a separate vessel add all ingredients in Phase B, heat to 75°C until melted. Add Phase B to Phase A @ 75°C. Add Phase C at 75°C. Stir with high shear and cool. At 60°C add Phase D. At 45°C add Phase E. Adjust to pH 7.8-8.2

LOW VISCOSITY SPF 15+ CRÈME

Formulation F-24-27

Low viscosity o/w emulsion crème with novel polymer designed to boost organic UV absorbers to perform at a level of SPF 15+. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Great for dry or chapped skin.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1 —Heat to 75°C		
Distilled Water	Water	56.15
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.10
Veegum Ultra (RT Vanderbilt)	Magnesium Aluminum Silicate	0.50
Phase A-2		
Butylene Glycol	Butylene Glycol	2.00
Ticaxan Xanthan NF (TIC Gum)	Xanthan Gum	0.50
Phase B—Add at 75°C		
Finsolv G-2 (Finetex)	C16-17 Alkyl Benzoate	2.00
Prolipid 141 (ISP)	Glyceryl Stearate, Behenyl Alcohol Palmitic Acid, Stearic Acid, Lecithin, Lauryl Alcohol, Myristyl Alcohol, Cetyl Alcohol	5.00
Escalol 557 (ISP)	Ethylhexyl Methoxycinnamate	7.50
Escalol 567 (ISP)	Benzophenone-3	3.00
Escalol 587 (ISP)	Ethylhexyl Salicylate	3.00
Lipo GMS 450 (Lipo)	Glyceryl Stearate	1.50
Ceraphyl 368 (ISP)	Ethylhexyl Palmitate	3.00
Phase C—Add at 75°C		
TEA 99%	Triethanolamine	0.30
Phase D—Add at 55°C		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	5.00
SYNTRAN® PC 5227	Polyacrylate-15, Polyacrylate-17	10.00
Phase E—Add at 45°C		
Liquid Glydant Plus (Lonza)	DMDM Hydantoin, IPBC	0.35
Fragrance	Fragrance	0.10
	YIELD:	100.00

Procedure

Combine Phase A-1 ingredients and heat to 75° C. Stir for 10 minutes. Premix Phase A-2 and add to A-1. Batch will thicken, adjust stirring to avoid aeration. In a separate vessel add all ingredients in Phase B, heat to 75°C until melted. Add Phase B to Phase A @ 75°C. Add Phase C at 75°C. Stir with high shear and cool. At 55°C separately add Phase D ingredients. Homomix. Cool to 45°C, add Phase E. Final pH 7.6-8.0

ECONOMICAL SPF 30 SKIN AND SUN CRÈME

Formulation F-24-37

Economical w/o emulsion crème with novel polymer designed to boost organic UV absorbers to perform at a level of SPF 30. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Great for dry or chapped skin. Low irritation potential.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A—Heat to 75°C		
Distilled Water	Water	59.95
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Propylene Glycol	Propylene Glycol	2.00
Ticaxan Xanthan Gum NF (TIC Gum)	Xanthan Gum	0.15
Phase B—Add at 75°C		
SYNTRAN® PC 5227	Polyacrylate-15 (and) Polyacrylate-17	10.00
Phase C—Add at 75°C		
Finsolv TN (Finetex)	C12-15 Alkyl Benzoate	3.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.25
Escalol 557 (ISP)	Ethylhexyl Methoxycinnamate	7.50
Escalol 567 (ISP)	Benzophenone-3	3.00
Escalol 587 (ISP)	Ethylhexyl Salicylate	3.00
Crodafos CES (Croda)	Cetearyl Alcohol (and) Ceteth-10 Phosphate (and) Dicapryl Phosphate	6.00
Crodacol CS-50 (Croda)	Cetearyl Alcohol	4.00
TEA 99%	Triethanolamine	0.35
Phase D—Add at 45°C		
Liquid Germall Plus (ISP)	Diazolidinyl Urea, IPBC	0.60
Fragrance	Fragrance	0.15
	YIELD:	100.00

Procedure

Combine Water and Dissolvine and begin heating to 75°C. Premix the propylene glycol and Xanthan gum. Add premix to heated water and stir until gum is adequately dispersed. At 75°C, just prior to addition of oil phase, add **SYNTRAN 5227**. In a separate vessel melt all Phase C ingredients. Add Phase C to Phase A/B @ 75°C. Stir with high shear and cool slowly. Homomix until smooth and homogeneous. At 45°C add Phase D. Continue to stir with side sweep until cool. Adjust pH 6.5 - 7.2

ECONOMICAL SPF 30 SKIN AND SUN CREME

Formulation F-24-38

Economical w/o emulsion crème with novel polymer designed to boost organic UV absorbers to perform at a level of SPF 30. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Great for dry or chapped skin. Low irritation potential.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A—Heat to 75°C		
Distilled Water	Water	59.95
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Propylene Glycol	Propylene Glycol	2.00
Phase B—Add at 75°C		
SYNTRAN® PC 5227	Polyacrylate-15 (and) Polyacrylate-17	10.00
Phase C—Add at 75°C		
Finsolv TN (Finetex)	C12-15 Alkyl Benzoate	3.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.25
Escalol 557 (ISP)	Ethylhexyl Methoxycinnamate	7.50
Escalol 567 (ISP)	Benzophenone-3	3.00
Escalol 587 (ISP)	Ethylhexyl Salicylate	3.00
Crodafos CES (Croda)	Cetearyl Alcohol (and) Ceteth-10 Phosphate (and) Dicapryl Phosphate	6.00
Crodacol CS-50 (Croda)	Cetearyl Alcohol	4.00
Lecinol S-10 (Barnet)	Hydrogenated Lecithin	0.15
TEA 99%	Triethanolamine	0.35
Phase D—Add at 45°C		
Liquid Germall Plus (ISP)	Diazolidinyl Urea, IPBC	0.60
Fragrance	Fragrance	0.15
	YIELD:	100.00

Procedure

Combine Phase A ingredients and heat to 75°C. At 75°C, just prior to addition of Oil phase, add **SYNTRAN 5227**. In a separate vessel melt all Phase C ingredients, stir until homogeneous. Add Phase C to Phase A/B @ 75°C. Stir with high shear and cool slowly. Homomix until smooth and homogeneous. At 45°C add Phase D. Continue to stir with side sweep until cool. Adjust pH 6.5 - 7.2

HIGH SPF LOTION

Formulation F-24-88

Unique low viscosity lotion with novel SPF boosting polymers. Provides high SPF protection using a combination of organic and inorganic sunscreens. High protection with low organic actives. Low irritation potential. Moisturizing formula spreads easily and rubs in quickly.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1 —Heat to 75°C		
Distilled Water	Water	57.85
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Phase A-2		
Butylene Glycol	Butylene Glycol	2.00
Ticaxan Xanthan NF (TIC Gum)	Xanthan Gum	0.25
Phase A-3		
SYNTRAN® PC 5227	Polyacrylate-15 (and) Polyacrylate-17	3.00
Phase B—Add at 75°C		
Finsolv G-2 (Finetex)	C14-16 Alkyl Benzoate	3.00
Crodafos CES (Croda)	Cetearyl Alcohol (and) Ceteth-10 Phosphate (and) Dicapryl Phosphate	4.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	0.50
Escalol 577 (ISP)	Ethylhexyl Methoxycinnamate	7.50
Escalol 567 (ISP)	Benzophenone-3	5.00
Escalol 587 (ISP)	Ethylhexyl Salicylate	5.00
Tioveil FIN (Uniqema)	Titanium Dioxide Dispersion	4.00
TEA 99%	Triethanolamine	0.15
Phase C—Add at 75°C		
SYNTRAN® PC 5400	Ammonium Acrylates Copolymer	3.00
Phase D—Add at 60°C		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	2.00
DC 200 Fluid 350 cst (Dow Corning)	Dimethicone	2.00
Phase E—Add at 45°C		
Liquid Germall Plus (ISP)	Propylene Glycol, Diazdidinyl Urea, IPBC	0.60
Fragrance	Fragrance	0.10
	YIELD:	100.00

pH 7.0 – 7.5

Procedure

Combine Phase A-1 ingredients and begin heating to 75°C. 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 Phase B ingredients, heat to 75°C until melted. Add Phase B to Phase A @ 75°C. Stir until homogeneous. Add Phase C. Cool to 55-60°C. Add Phase D ingredients at 60°C. Homomix. Cool slowly to 45°C, add Phase E. Adjust pH to 7.0-7.5 with TEA, if necessary. 1/07
In Vitro SPF = 50+; *Boo* score = 2.

SKIN MOISTURIZER with SPF 20+

Formulation F-24-103

Moisturizing lotion with patented Olefin/Graft polymer technology designed to boost organic UV absorbers to perform at a level of SPF 20+. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Instantly makes dry skin more supple and hydrated. **SYNTRAN® PC 5227** also imparts enhanced moisturization, softness and unique rub-in and re-fattening qualities to skin. Low irritation potential.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1—Heat to 75°C		
Distilled Water	Water	61.95
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Ultrez 21 (Noveon)	Acrylates/C10-30 Alkyl Acrylates Crosspolymer	0.30
Phase A-2 – Add at 45°C		
Butylene Glycol	Butylene Glycol	4.00
Ticaxan Xanthan Gum NF (TIC Gum)	Xanthan Gum	0.25
Phase A-3—Add at 75°C		
Optiphen (ISP)	Phenoxyethanol, Caprylyl Glycol	0.75
Phase B—Add at 75°C		
Protachem CTG (Protameen)	Caprylic/Capric Triglyceride	1.00
Protachem OP (Protameen)	Ethylhexyl Palmitate	2.00
Ceraphyl SLK (ISP)	Isodecyl Neopentanoate	3.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	1.00
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Escalol 557 (ISP)	Ethylhexyl Methoxycinnamate	5.00
Escalol 567 (ISP)	Benzophenone-3	2.00
Escalol 587 (ISP)	Ethylhexyl Salicylate	2.00
Crodafos CES (Croda)	Cetearyl Alcohol (and) Ceteth-10 Phosphate (and) Dicaprylyl Phosphate	3.00
Phase C-1—Add at 55°C		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	3.00
DC 200 Fluid 350 cst (Dow Corning)	Dimethicone	3.00
Phase C-2—Add at 55°C		
TEA 99%	Triethanolamine	0.50
SYNTRAN® PC 5227	Polyacrylate-15 (and) Polyacrylate-17	6.00
Phase D—Add at 45°C		
Fragrance	Fragrance	0.20
	YIELD:	<u>100.00</u>

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, add Phase C-1 ingredients. Homomix batch until uniform. Individually add each Phase C-2 ingredient, stir between additions until batch is smooth and homogeneous. Cool batch to 45°C add Phase D. Adjust pH to 6.3 – 6.8

1/07

OIL FREE SKIN LOTION with SPF 20+
Formulation F-24-160

Elegant Oil Free lotion with patented Olefin/Graft polymer technology designed to boost organic UV absorbers to perform at a level of SPF 20+. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Instantly makes dry skin more supple and hydrated.

SYNTRAN® PC 5227 also imparts enhanced moisturization, softness and unique rub-in and re-fattening qualities to skin. Low irritation potential.

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1—Heat to 75°C		
Distilled Water	Water	62.00
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Ultrez 21 (Noveon)	Acrylates C10-30 Alkyl Acrylates Copolymer	0.30
Phase A-2 – Add at 45°C		
Butylene Glycol	Butylene Glycol	4.00
Ticaxan Xanthan Gum NF (TIC Gum)	Xanthan Gum	0.20
Phase A-3—Add at 75°C		
Optiphen (ISP)	Phenoxyethanol, Caprylyl Glycol	0.75
Phase B—Add at 75°C		
Protachem CTG (Protameen)	Caprylic/Capric Triglyceride	1.00
Protachem OP (Protameen)	Ethylhexyl Palmitate	2.00
Ceraphyl SLK (ISP)	Isodecyl Neopentanoate	3.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	1.00
Escalol 557 (ISP)	Ethylhexyl Methoxycinnamate	5.00
Escalol 567 (ISP)	Benzophenone-3	2.00
Escalol 587 (ISP)	Ethylhexyl Salicylate	2.00
Crodafos CES (Croda)	Cetearyl Alcohol (and) Ceteth-10 Phosphate (and) Dicetyl Phosphate	3.00
Phase C-1—Add at 55°C		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	4.00
DC 200 Fluid 350 cst (Dow Corning)	Dimethicone	3.00
Phase C-2—Add at 55°C		
TEA 99%	Triethanolamine	0.50
SYNTRAN® PC 5227	Polyacrylate-15 (and) Polyacrylate-17	6.00
Phase D—Add at 45°C		
Fragrance #55442 (Belle-aire)	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, add Phase C-1 ingredients. Homomix batch until uniform. Individually add each Phase C-2 ingredient, stir between additions until batch is smooth and homogeneous. Cool batch to 45°C add Phase D. Adjust pH to 6.2 – 6.5

3/07

MOISTURIZING CRÈME WITH SYNTRAN® PC 5227

Rich textured moisturizing crème provides elegant skin feel and lubricity. Non-greasy formula with no residual tackiness. Instantly makes dry skin more supple and hydrated. Patented Olefin/Graft polymer technology provided by **SYNTRAN® PC 5227** imparts enhanced moisturization, softness and unique rub-in and re-fatting qualities to skin.

Formulation F-24-39

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1 —Heat to 75°C		
Distilled Water	Water	65.80
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Phase A-2 – Add at 45°C		
Butylene Glycol	Butylene Glycol	3.00
Ticaxan Xanthan NF (TIC Gum)	Xanthan Gum	0.25
Phase A-3 - Add at 75°C		
Phenoxetol (Clariant)	Phenoxyethanol	1.00
SYNTRAN® PC 5227	Polyacrylate-15, Polyacrylate-17	10.00
Phase B—Add at 75°C		
Prolipid 141 (ISP)	Glyceryl Stearate, Behenyl Alcohol, Palmitic Acid Stearic Acid , Lecithin, Lauryl Alcohol Myristyl Alcohol, Cetyl Alcohol	3.00
Cetyl Alcohol (Protameen)	Cetyl Alcohol	1.50
Protachem CTG (Protameen)	Caprylic/Capric Triglyceride	3.00
Protachem ISP (Protameen)	Isostearyl Palmitate	2.00
Ceraphyl SLK (ISP)	Isodecyl Neopentanoate	3.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.20
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Phase C—Add at 55°C		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	5.00
DC 200 Fluid 350 cst (Dow Corning)	Dimethicone	1.00
Phase D—Add at 45°C		
Fragrance	Fragrance	0.20
10% Citric Acid	Citric Acid	Q.S.
	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 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

SKIN MOISTURIZER with SPF 15

Moisturizing lotion with patented Olefin/Graft polymer technology designed to boost organic UV absorbers to perform at a level of ~SPF 15. Superior moisturizing formula spreads easily and rubs in quickly. Satin smooth skin feel. Instantly makes dry skin more supple and hydrated.

SYNTRAN® PC 5227 also imparts enhanced moisturization, softness and unique rub-in and re-fattening qualities to skin. Low irritation potential.

Formulation F-24-52

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A-1—Heat to 75°C		
Distilled Water	Water	63.15
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Phase A-2 – Add at 45°C		
Butylene Glycol	Butylene Glycol	2.00
Ticaxan Xanthan Gum NF (TIC Gum)	Xanthan Gum	0.25
Phase A-3—Add at 75°C		
Phenoxyetol (Clariant)	Phenoxyethanol	0.75
SYNTRAN® PC 5227	Polyacrylate-15 (and) Polyacrylate-17	10.00
Phase B—Add at 75°C		
Protachem CTG (Protameen)	Caprylic/Capric Triglyceride	1.00
Protachem ISP (Protameen)	Isostearyl Palmitate	2.00
Ceraphyl SLK (ISP)	Isodecyl Neopentanoate	3.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.10
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Escalol 557 (ISP)	Ethylhexyl Methoxycinnamate	2.50
Escalol 567 (ISP)	Benzophenone-3	1.50
Escalol 587 (ISP)	Ethylhexyl Salicylate	1.50
Crodafos CES (Croda)	Cetearyl Alcohol (and) Ceteth-10 Phosphate (and) Dicetyl Phosphate	5.00
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 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 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 7.0 +/- 0.5