

## Polyderm™

### Polyurethane "Conditioners" for Personal Care

#### Polymeric Triglycerides and Polymeric Hydroxyesters

- **Polyderm PPI-CO**  
Castor Oil/IPDI Copolymer  
*Adds shine, extended wear, water resistance, pigment dispersing for color cosmetics*
- **Polyderm PPI-CO-40**  
PEG-40 Hydrogenated Castor Oil/IPDI Copolymer  
*Water soluble, O/W emulsification, fragrance coupling; adds slip and lubricity in sticks*
- **Polyderm PPI-CO-200**  
PEG-200 Hydrogenated Castor Oil/IPDI Copolymer  
*Rheology modifier for water phase; reduces whitening of antiperspirants, fragrance solubilizer*
- **Polyderm PPI-DGDIS**  
Polyglyceryl-2 Diisostearate/IPDI Copolymer  
*Vegetable based shine agent for lip products, substantive film former, sheen additive for hair*
- **Polyderm PPI-GRC**  
Glyceryl Diricinoleate/IPDI Copolymer  
*Naturally derived pigment dispersant and suspending agent, water resistant film former for color cosmetics*
- **Polyderm PPI-PE**  
Polydiethylene Glycol Adipate/IPDI Copolymer  
*Hydrophobic film former; provides maximum shine and wear for color cosmetics, excellent adhesion and water resistance for use in sunscreens, barrier creams and lotions*

#### Polymeric Silicone Copolyol Emollients

- **Polyderm PPI-SI-WI**  
Bis-PPG-15 Dimethicone/IPDI Copolymer  
*Water insoluble silicone polymer; water repellent and film former; reduces tack in AP solids, improves wet comb and after feel of styling products*
- **Polyderm PPI-SI-WS**  
Bis-PEG-15 Dimethicone/IPDI Copolymer  
*Water soluble conditioner for clear shampoos, conditioners and styling aids; substantive emolliency for skin care*
- **Polyderm PPI-SI-LSA**  
Bis-PEG-1 Dimethicone-PEG-2 Soyamine/IPDI Copolymer  
*Cationic silicone urethane; adds shine, gloss and lubricity to hair; improves wet and dry combing; water resistant film former for creams and lotions*

#### Features

- superior substantivity
- broad pH stability
- ease of usage
- effective at low levels
- resistance to hydrolysis

#### Applications

- emollients
- emulsifiers
- film formers
- thickeners
- slip additives

#### Polymeric Cationic Hydroxy Amine Conditioners

- **Polyderm PPI-G7/CA**  
Glycereth-7-Diglycerol-PEG-15 Cocamine/IPDI Copolymer  
*Water soluble polymer derived from glycerol, diglycerol and cocamine; mild surfactant and humectant for cleansers, conditioner for skin and hair, fragrance solubilizer*
- **Polyderm PPI-SA**  
Di-PEG-2 Soyamine/IPDI Copolymer  
*Polymeric emollient derived from soya; provides superior deposition on skin and hair, excellent additive for liquid and bar soaps*
- **Polyderm PPI-SA-15**  
PEG-15 Soyamine/IPDI Copolymer  
*Water soluble conditioner for clear shampoos, conditioners and styling aids; substantive emolliency for skin care*
- **Polyderm PPI-SA-15 Salicylate**  
PEG-15 Soyamine/IPDI Copolymer (and) Salicylic Acid  
*Soyamine urethane complexed with salicylic acid; unique source and delivery of salicylic acid for hair and skin care products with excellent conditioning and emolliency*

#### Polymeric Resinous Emulsions

- **Polyderm PPI-PE/PA ED**  
Polyether-Propionic Acid/TMXDI Copolymer  
*Water based polyurethane polyether microemulsion resin; produces soft, durable and flexible water resistant film; fixative and film former for styling gels, mousses and aerosols*
- **Polyderm PPG-17**  
PPG-17/IPDI Copolymer  
*Water based polyurethane polyether microemulsion resin; produces soft, durable and flexible water resistant film; fixative and film former for styling gels, mousses and aerosols.*

#### Polymeric Thickeners

- **Dermothix 75**  
Disteareth-75 IPDI  
*Water dispersible urethane; viscosity builder for aqueous surfactant systems; stable high internal phase O/W emulsifier; provides broad pH stability*
- **Dermothix 75L**  
Disteareth-75 IPDI (and) Glycereth-7 Caprylate/Caprates (and) Water  
*Liquid viscosity builder for aqueous systems; compatible with all surfactant systems; additive for post adjusting product's final viscosity*
- **Dermothix 100**  
Disteareth-100 IPDI  
*Water soluble urethane in flaked form; produces clear viscous solutions in water; soluble in surfactant systems; high internal phase O/W emulsifier*

# Polyderm™ Formulary

## Polymeric Lipstick w-PPI-GRC (ps4-075)

Product Name	INCI NAME	W/W%
<b>Part A</b>		
Performalene	Polyethylene	8.00
SP1020	Ozokerite Wax	3.00
SP 89	Microcrystalline Wax	3.00
Dermol GDL	Glyceryl Dilaurate	3.00
Marrix™ SF	Di-C12-15 Alkyl Fumarate	8.00
Polyderm PPI-GRC	Glyceryl Diricinoleate/IPDI Copolymer	30.00
Citmol 316	Triisocetyl Citrate	10.00
Bernel Ester TCC	Tricaprylyl Citrate	10.00
Bernel Ester DISM	Diisostearyl Malate	10.00
<b>Part B</b>		
Color Blend (jc3-273)		15.00
<b>TOTAL</b>		<b>100.00</b>

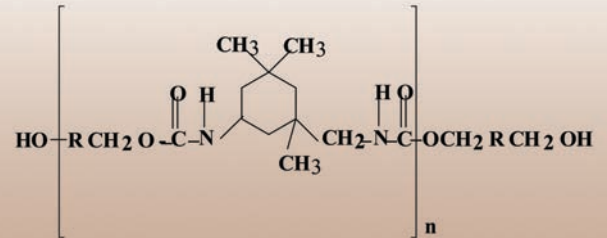
## Polyderm Styling Shampoo (jc3-97)

Product Name	INCI NAME	W/W%
Steol CS-230	Sodium Laureth Sulfate	15.00
Stepanol WAC-P	Sodium Lauryl Sulfate	15.00
Foamtaine CAB-G	Cocamidopropyl Betaine	10.00
Polyderm PE-PA	Polyether-Propionic Acid/TMXDI Copolymer	3.00
Phenobact	Phenoxyethanol & Methylparaben & Ethylparaben & Propylparaben & Butylparaben	1.00
Fragrance		0.20
Deionized Water		55.80
<b>TOTAL</b>		<b>100.00</b>

## Polyderm Body Wash (ps1-274)

Product Name	INCI NAME	W/W%
Deionized Water	Aqua	54.80
Plantaren 2000N	Decyl Glucoside	5.00
Mackam CBS-50	Cocamidopropyl Hydroxysultaine	7.00
Foamtaine CAB-G	Cocamidopropyl Betaine	10.00
Steol CS-230	Sodium Laureth Sulfate	19.00
Dermothix 75	Disteareth-75/IPDI Copolymer	1.00
Polyderm PPI-SA	Di-2 PEG Soyamine/IPDI Copolymer	1.00
Polyderm PPI-SA-15	Di-15 PEG Soyamine/IPDI Copolymer	1.00
Fragrance		0.20
Phenobact	Phenoxyethanol & Methylparaben & Ethylparaben & Propylparaben & Butylparaben	1.00
<b>TOTAL</b>		<b>100.00</b>

## POLYDERM STRUCTURE



## Polyderm Deposition

Control (0% al)		<b>Procedure:</b> <ul style="list-style-type: none"> <li>wool patches shampooed for 1 min. with test product &amp; 2.5 gr. of water</li> <li>rinsed for 1 min. at 40C</li> <li>treated with 0.0125% sol. of FD&amp;C Blue 1 &amp; 0.0046% HCl for 1 min.</li> <li>rinsed until rinse water was colorless</li> </ul>
Polyquaternium 10 (1% al)		
Behentrimonium Methosulfate (1% al)		
Polyderm PPI-SA (1% al)		



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