

SUN GUARD Broad Spectrum Sunscreen - Very Water Resistant In-Vivo Tested SPF27

<u>Ingredient</u>	<u>INCI Designation</u>	<u>%W/W</u>	<u>Supplier</u>
<u>Phase A</u>			
Arlamol HD	Isohexadecane	1.50	Uniqema/Croda
Finsolv TN	C12-15 Alkyl Benzoate	3.00	Finetex
DC 245 Fluid	Cyclopentasiloxane	2.25	Dow Corning
Span 60	Sorbitan Stearate	1.00	Uniqema/Croda
Arlacel 165	Glyceryl Stearate (and) PEG-100 Stearate	2.00	Uniqema/Croda
Neo Heliopan 303	Octocrylene	2.00	Symrise
Neo Heliopan AV	Ethylhexyl Methoxycinnamate	7.50	Symrise
Neo Heliopan BB	Benzophenone-3	3.00	Symrise
Spectraveil FIN	Zinc Oxide (and) C12-15 Alkyl Benzoate (and) Polyhydroxystearic Acid	6.00	Uniqema/Croda
<u>Phase B</u>			
Water	Water (Aqua)	54.25	
AMAZE™ XT	Dehydroxanthan Gum	0.50	AkzoNobel, Global Personal Care
DERMACRYL® AQF (45% active)	Acrylates Copolymer	4.40	AkzoNobel, Global Personal Care
Glycerin	Glycerin	3.00	JT Baker
Tioveil AQ-N	Titanium Dioxide (and) Alumina (and) Silica (and) Sodium Polyacrylate	7.00	Uniqema/Croda
<u>Phase C</u>			
DRY-FLO® PURE	Aluminum Starch Octenylsuccinate	2.00	AkzoNobel, Global Personal Care
Glydant Plus Liquid	DMDM Hydantoin (and) Iodopropynyl Butylcarbamate	0.60	Lonza
Citric Acid (50% solution)	Citric Acid	<u>qs to pH = 7.0</u> 100.00	

Procedure:

Weigh Phase B in the main vessel, disperse AMAZE™ XT into water and mix moderately until hydrated. Add the rest of Phase B ingredients, minus the Tioveil AQ-N, and begin heating Phase B to 75°C. Pre-mix Tioveil AQ-N and add to Phase B, mix until uniform. In a side vessel, combine Phase A ingredients and heat to 75°C. Add Phase A to Phase B and homogenize at 10,000 RPM for 1 minute. Cool batch down to 40°C with moderate mixing. Add Phase C ingredients and homogenize until uniform. Cool batch down to 25°C with low mixing. Adjust pH to 7 with Citric Acid.