

# Emollients

## Your Essential Selection Guide

Eighth Edition



Innovation you can build on™

CRODA

# Emollients... Your Essential Selection Guide

Croda’s extensive range of emollients offers a broad spectrum of sensory and functional benefits to provide infinite formulation flexibility. Take the guesswork out of your selection process and skip the “trial and error” phase with this easy to use selection guide for perfect results every time.

Product and INCI Name	Key Properties								Physical Form	Emollient			After-feel		Functional Benefits				Applications						Additional Comments
	Skin Migration Value (mm² after 10 mins)	Degree of "Skin Play"	Refractive Index	Tack	Melting Point °C	Dynamic Viscosity (cP)	Required HLB	Polarity		Heavy	Medium	Light	Silky	Cushiony	Solvent for Waxes	Pigment Wetting	Glossing Agent	Emulsifier/ Co-emulsifier	Body Care	Facial Care	Sun Care	Hair Care	Colour Cosmetics	Green	
Arlamol™ HD Isohexadecane	1772	L	1.4394	L	-	3.1	12	Low	Clear, colourless liquid			●	●						■	■	■		■		Excellent spreader that reduces greasiness of anhydrous systems.
Arlamol PS15E PPG-15 Stearyl Ether	739	M	1.4484	M	-	56.2	10	High	Clear, pale yellow liquid			●							■	■			■		Good solvent for a wide range of actives.
Crodamol™ IPIS Isopropyl Isostearate	1257	L	1.4444	L	-	7.7	9	Medium	Clear, colourless liquid			●	●						■	■	■		■	■	Effective make-up remover. Proven moisturising benefits.
Crodamol ML Myristyl Lactate	-	M	1.4438	L	-	-	12	-	Clear, pale yellow liquid/paste			●	●						■			■	■	■	Melts on application to the skin. Reduces stickiness in roll-on antiperspirants and emulsion systems. Binder for pressed powders. Aqueous / alcoholic solubility up to 50:50.
Crodamol PIA Propylene Glycol Isoceteth-3 Acetate	1004	H	1.4459	L	-	17.9	-	High	Clear, colourless liquid			●	●				✓	✓	■		■	■			Self-emulsifying oil. Excellent "skin play" for massage applications.
Crodamol SFX* PPG-3 Benzyl Ether Ethylhexanoate	1126	L	1.4660	L	-	11.1	14	High	Clear, pale yellow liquid			●	●			✓			■	■	■	■	■		Good alternative to volatile silicones especially cyclomethicone D5. Solvent for organic sunscreens.
Crodamol TN Isotridecyl Isononanoate	1153	L	1.4437	L	-	9.1	10	Low	Clear, colourless liquid			●	●		✓					■	■			■	Sensorial replacement for cyclomethicone.
Crodamol W Stearyl Heptanoate (and) Stearyl Caprylate	-	M	1.4463	L	25-27	-	8	-	Off-white solid			●		●					■	■			■	■	Approved natural by Ecocert. High water repellency. Imparts a cooling effect on the skin.
Sensasil™ PCA PCA Dimethicone	387	L	1.4074	L	-	619.6	10	Low	Yellow liquid			●							■		■	■	■		Coupling agent for silicones and other oils.
Lanesta™ S Isopropyl Lanolate	-	H	-	L	-	-	11	-	Yellow paste			●		●					■	■	■		■	■	Melts on application to the skin. Readily absorbs without stickiness.
Cithrol™ PGMIS Propylene Glycol Isostearate	855	L	1.4540	L	-	42.3	-	High	Clear, colourless liquid		●			●		✓		✓	■	■	■				Solvent for organic sunscreens.
Crodamol DIPD Diisopropyl Dimer Dilinoleate	739	M	1.4647	L	-	81.7	6	Medium	Clear, colourless liquid		●								■	■	■	■	■	■	Good lubrication and water repellent properties.
Crodamol DISD Diisostearyl Dimer Dilinoleate	133	L	1.4720	L	-	270.6	7	Medium	Clear, colourless liquid		●										■		■	■	Enhances wash-off resistance.
Crodamol GTEH Triethylhexanoin	962	M	1.4431	L	-	22.8	10	Medium	Clear, colourless liquid		●			●		✓			■	■	■			■	Sensorial replacement for cyclomethicone. Solvent for organic sunscreens.
Crodamol GTIS Trisostearin	452	M	1.4650	L	-	114	8	High	Clear, pale yellow liquid		●					✓	✓				■		■	■	Approved natural by Ecocert. Film forming properties.
Crodamol ISIS Isostearyl Isostearate	1018	M	1.4600	L	-	34.9	11	Medium	Clear, colourless liquid		●			●		✓			■	■	■		■	■	Approved natural by Ecocert. Boosts the natural skin barrier to improve skin hydration.
Crodamol SSA* Decyl Isostearate (and) Isostearyl Isostearate	1195	H	1.4508	L	-	18.9	9	Medium	Clear, colourless liquid		●			●					■	■	■		■	■	Approved natural by Ecocert. Sensory alternative to Squalane.
Crodamol STS* PPG-3 Benzyl Ether Myristate	945	H	1.4695	L	-	21.5	9	High	Clear, pale yellow liquid		●			●		✓	✓		■		■	■		■	Functional replacement for dimethicone. Enhances wash-off resistance. Confers hair glossing benefits.
Crodamol TINN Triisononanoin	944	M	1.4468	L	-	46.8	11	Medium	Clear, colourless liquid		●			●					■	■				■	Provides even actives distribution and elegant, soft skin feel.
Crodamol TTIS Trimethylolpropane Trisostearate	380	M	1.4630	L	-	137	6	Medium	Clear, pale yellow liquid		●				✓	✓	✓						■	■	Reduces skin migration/bleed in lip glosses.
Cromollient™ DP3A* Di-PPG-3 Myristyl Ether Adipate	855	M	1.4500	L	-	65	11	High	Clear, colourless liquid		●			●	✓	✓			■	■	■			■	Imparts distinctive rich skin feel without greasiness.
Cithrol GMIS 40 Glyceryl Isostearate	133	L	1.4650	M	-	476.5	-	High	Clear, colourless liquid	●							✓	✓	■	■	■		■	■	Approved natural by Ecocert.
Cithrol GMM Glyceryl Myristate	-	-	-	-	44-46	-	-	-	White solid	●								✓	■	■	■	■		■	Approved natural by Ecocert. Bodying agent.
Cithrol PG21IS Polyglyceryl-2 Isostearate	79	L	1.4698	H	-	1351.6	-	High	Clear, colourless liquid	●						✓	✓	✓	■					■	Reduces skin migration/bleed in lip glosses.
Cithrol PG23IS Polyglyceryl-2 Trisostearate	284	L	1.4695	M	-	240	-	High	Clear, pale yellow liquid	●						✓	✓	✓	■					■	Modifies viscosity of oily systems without stickiness.
Cithrol PG3PR Polyglyceryl-3 Polyricinoleate	113	L	1.4790	H	-	2288.5	-	High	Amber liquid	●						✓	✓	✓	■		■			■	Approved natural by Ecocert.
Cithrol PG32IS Polyglyceryl-3 Diisostearate	79	L	1.4707	H	-	1779.3	-	High	Clear, pale yellow liquid	●					✓	✓	✓	✓	■		■			■	Approved natural by Ecocert.
Crodaderm™ S* Sucrose Polysoyate	177	L	1.4754	M	-	320.3	6	High	Clear, pale yellow liquid	●					✓		✓		■	■	■			■	Exceptional skin moisturising and softening benefits. Enhances the retention of actives.
Crodamol MM Myristyl Myristate	-	-	-	-	33-35	-	8	-	Off-white solid	●									■					■	Approved natural by Ecocert. Bodying agent.
Crodamol PTIS Pentaerythrityl Tetraisostearate	227	L	1.4750	M	-	218.6	7	High	Clear, colourless liquid	●				●	✓	✓	✓		■		■			■	Enhances wash-off resistance. Good alternative to castor oil.
Cromollient ESP* Tris(PPG-3 Benzyl Ether) Citrate	99	L	1.4938	M	-	361.4	13	High	Yellow to amber liquid	●							✓				■			■	Works synergistically with organic sunscreens.
Cromollient SCE* Di-PPG-2 Myreth-10 Adipate	452	M	1.4593	L	-	149.4	-	High	Clear, colourless liquid	●				●	✓	✓			■		■	■		■	Suitable for clear surfactant systems.
Liquiwax™ PolyEFA* Octyldodecyl/PPG-3 Myristyl Ether Dimer	342	M	1.4660	M	-	244.0	5	High	Clear, viscous liquid	●				●		✓	✓			■	■			■	Good pigment wetting properties.
Liquiwax PolyIPL* Stearyl/PPG-3 Myristyl Ether Dimer Dilinoleate (and) Beeswax (Proposed)	-	M	1.4640	M	-	-	-	-	Buttery yellow solid	●				●			✓			■				■	Melts on application to the skin. Synthetic replacement for Isopropyl Lanolate.
Procetyl™ AWS PPG-5-Ceteth-20	70	L	1.4592	H	-	163.6	-	High	Clear/hazy colourless liquid	●						✓		✓					■	■	Excellent solubiliser and wetting agent.
Supermol™ L Pentaerythrityl Isostearate/Caprate/Caprylate/Adipate	154	L	1.4685	M	-	767.2	5	High	Clear, yellow liquid	●					✓	✓	✓			■				■	Superfatting agent. Excellent pigment wetting properties.
Supermol S Pentaerythrityl Stearate/Caprate/Caprylate/Adipate	-	M	-	M	-	-	11	-	Yellow paste	●				●			✓			■				■	Superfatting agent. Melts on application to the skin.
Super Sterol Ester C10-30 Cholesterol/Lanosterol Esters	-	L	1.4710	H	-	-	9	-	White paste	●				●			✓			■				■	Skin replenishing, protection and repair benefits. Biomimetic emollient. Melts on application to the skin.
Super Sterol Liquid C10-30 Cholesterol/Lanosterol Esters	177	L	1.4883	M	-	682.5	6	Medium	Clear, colourless liquid	●				●		✓	✓			■				■	Skin replenishing, protection and repair benefits. Biomimetic emollient.

**Skin Migration Value** - defines the degree of migration, over a 10 minute period, when 20ul of product is dropped onto Vitro Skin™ under controlled conditions.

**Skin Play** - relates to the application properties of the emollients and defines the "massagability" of the product in terms of ease and duration. This parameter was assessed using a panel of sensory evaluators.

A material with a high degree of skin play (H) will move freely over the surface of the skin during application and will remain on the surface of the skin long enough to facilitate spreading and even coverage. Such materials are ideal for body moisturisers, self-tanning products, sun care and foundations.

A material with low skin play (L) will not move freely over the surface of the skin during application. This may be a highly tenacious product with rheological properties that do not favour extensive spreading or it may be an emollient that is quickly absorbed into the skin.

**Refractive Index** - measured at 25°C using an Abbe Refractometer. Refractive index can be used to define shine properties. In general terms, the higher the RI the greater the propensity to convey shine either on the skin or on hair. For a matifying effect, a material with a low RI should be selected.

**Tack** - assessed using a panel of sensory evaluators.

**Dynamic Viscosity** - measured at 30°C using the Anton Parr SVM 3000 Stabinger Viscometer according to ASTM D7042 test method.

**Afterfeel:**

**Silky** - a light, smooth skin feel

**Cushiony** - a robust, soft, velvety skin feel

**Emollient**

- Evaluated from a simple base formulation
- Evaluated in neat form

\* Patented product

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