




“Rheoppearl” series list



Trade name	INCI name	Gel types made from Rheoppearl	Compatible oils	Not Compatible oils		
Rheoppearl KL2 	Dextrin Palmitate	Transparent hard gels.	Hydrocarbons, Esters, Triglycerides, Isoparaffins, and so on.	Dimethicone, Cyclomethicone, Castor oil, Fluorocarbons		
Rheoppearl TL2* ¹ 	Dextrin Palmitate	Transparent soft gels.				
Rheoppearl WX	Dextrin Palmitate/Hexyldecanoate	Transparent Soft-Very thixotropic gels.				
Rheoppearl TT2	Dextrin Palmitate/Ethylhexanoate	Transparent Soft-thixotropic gels.				
Rheoppearl MKL2 	Dextrin Myristate	Transparent hard gels.				
Rheoppearl ISL2* ²	Stearoyl Inulin	White hard gels.			Cyclomethicone	Dimethicone, Fluorocarbons
Rheoppearl ISK2	Stearoyl Inulin	White hard gels				

*1 Rheoppearl TL2 is a lower acylation grade of Rheoppearl KL2.
 *2 Rheoppearl ISL2 has larger molecular weight than Rheoppearl ISK2.



Rheoppearl KL2
Transparent hard gels.



Rheoppearl TL2
Transparent soft gels.



Rheoppearl WX
Transparent Soft-Very thixotropic gels.



Rheoppearl TT2
Transparent Soft-thixotropic gels.



Rheoppearl MKL2
Ultimate Transparent hard gels.

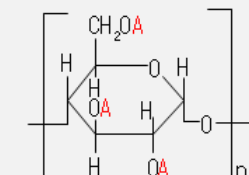


Rheoppearl ISK2
White hard gels



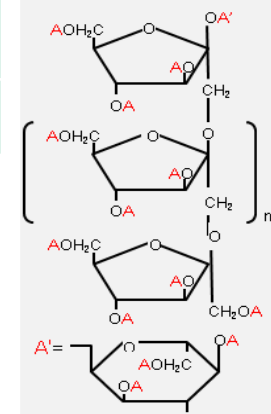
Rheoppearl ISL2
White hard gels.

Rheoppearl KL2, TL2, WX Rheoppearl TT2, MKL2



A=
 KL2, TL2: Palmitoyl group or H
 TT2: Palmitoyl group or 2-ethylhexanoyl group or H
 WX: Palmitoyl group or hexyldecanoyl group or H
 MKL2: Myristoyl group or H
 n: Degree of polymerization

Rheoppearl ISK2, ISL2






A'=
 or Stearoyl group or H
 A= Stearoyl group or H
 n: Degree of polymerization



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The characteristics of “Rheoppearl”

Trade name	Rheoppearl KL2	Rheoppearl TL2	Rheoppearl WX	Rheoppearl TT2	Rheoppearl MKL2	Rheoppearl ISL2	Rheoppearl ISK2
							
INCI name	DEXTRIN PALMITATE	DEXTRIN PALMITATE	DEXTRIN PALMITATE/ HEXYLDECANOATE	DEXTRIN PALMITATE/ ETHYLHEXANOATE	DEXTRIN MYLISTATE	STEAROYL INULIN	STEAROYL INULIN
Dissolution temp.	> 90°C (The dissolving temperature changes depending on oils used.)					70~80°C (melting point)	
1.Gelling of oils	-Compatible oils- Hydrocarbons Esters Triglycerides						Cyclomethicone and other oils
	Transparent hard gels	Transparent soft gels	Translucent soft/ Very thixotropic gels	Transparent soft/ Thixotropic gels	Ultimate transparent hard gels	White hard gels	White hard gels
2.Increasing viscosity of oils -Adjustability-	High	High	High	High	High	Low	Low
3.Stabilization of emulsion system	Good	Good	Good	Good	Good	Good	Good
4.Pigment dispersing ability	High	High	High	High	High	High	Medium
5.Rheological modification of waxes	Soften waxes					Harden waxes	

A variety of usage of Rheopearl series

1. Gelling of oils
 2. Increasing viscosity of oils
- Adjustability-

Good for oil base products

- Lip gloss, Liquid lip colors
- Mascaras
- Oil cakes
- Cleansings oils
- Massage oils



Recommended dosage

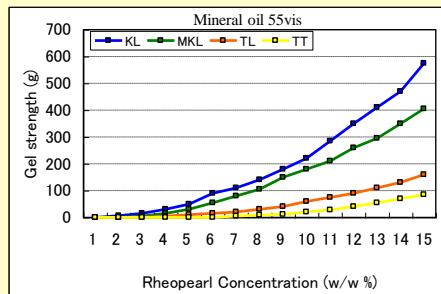
Rheopearl KL2、MKL2、WX

viscous liquid 2~5%
gel 6~10%

Rheopearl TL2、TT2

viscous liquid 3~10%
gel 8~20%

Rheopearl ISK2 10~20%



3. Stabilization of emulsion system

- Liquid foundations
- W/O, O/W Sunscreens
- Hair creams
- W/O solid type foundations



Recommended dosage

All of Rheopearls

Around 10% oil amount

W/O emulsion



O/W Sunscreen jelly



4. Pigment dispersion aid

- Liquid foundations
- Sunscreens
- Gel eye liner
- Oil Foundations



Recommended dosage

All of Rheopearls

Liquid 0.1%~

Titanium dioxide 50% + Mineral oil 50%

Blank +2% Rheopearl KL2



5. Rheological modification of wax

- Foundations
- Lip products
- Liquid type make up products
- Point make-ups



Recommended dosage

All of Rheopearls












0.5-5%

Candelilla wax 32% + Mineral oil 68%

+1% Rheopearl KL2 Blank



Other information

Trade name	INCI name	CAS No.	IECIC*	Origin	Country of raw material origin	Manufacturing country	 :Plant origin
Rheopearl KL2 Rheopearl TL2	Dextrin Palmitate	83271-10-7	listed	Dextrin: Cassava Palmitic acid: Palm and/or Coconut	South East Asia	Japan	 
Rheopearl WX	Dextrin Palmitate /Hexyldecanoate	-	-	Dextrin: Cassava Palmitic acid and Hexyldecanoic acid: Palm and /or Coconut	South East Asia	Japan	 
Rheopearl TT2	Dextrin Palmitate /Ethylhexanoate	183387-52-2	listed	Dextrin: Cassava Palmitic acid: Palm and/or Coconut	South East Asia	Japan	
				Ethylhexanoic acid: Petroleum	Un-known		
Rheopearl MKL2	Dextrin Myristate	93792-77-9	listed	Dextrin: Cassava Myristic acid: Palm and/or Coconut	South East Asia	Japan	 
Rheopearl ISK2 Rheopearl ISL2	Stearoyl Inulin	190524-47-1	listed	Inulin: Chicory roots	Belgium	Japan	
				Stearic acid: Soy bean oil and/or Colza oil	Canada, USA, Japan		
Unifilma HVY	Dextrin Isostearate	116580-54-2	listed	Dextrin: Cassava	South East Asia	Japan	 
				Isostearic acid: Rape seed	Europe		

* IECIC:Inventory of Existing Cosmetic Ingredients in China (已使用化妆品原料名称目录). By publishing the final version of IECIC, CFDA transfers the responsibilities of safety assessment of a cosmetic ingredient to its manufacturers or importers. The final version of IECIC 2014 is the only reference to identify whether an ingredient can be legally used in cosmetics manufactured in China or imported to China in the future.



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