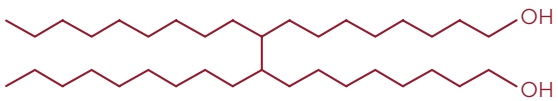
RADIANOL 1991



INCI Hydrogenated dilinoleyl alcohol
CAS 147853-32-5

CHARACTERISTICS

Physical form	Liquid
Acid value	0.00 - 0.10 mg KOH/g
Iodine value	0.00 - 0.50 g I_2/100g
Kinematic viscosity 20°C	4109.9 mm^2/s
Dynamic viscosity 20°C	2404.5 mPa.s
Density 25°C	0.8977 g/cm^3
Refractive index 20°C	1.481
Color APHA	< 50

FEATURES

Function	Moisturizer, dispersant, conditioning agent
Additional effects	Wetting performance, skin conditioning, shiny effect
Application	Skin care, hair care, make-up

FUNCTIONALITY AND APPLICATIONS

Hydrogenated dilinoleyl alcohol or dimer diol is a saturated fatty alcohol with two primary hydroxyl groups. It is stable to oxidation and color deterioration.

FEATURES - Radianol 1991 adds water resistance to health and beauty formulations due to its long carbon chain. The high refractive index can be correlated with a shiny aspect on skin. Dimer diol improves both stability and sensory properties regarding spreadability, absorption and tackiness.

100% NATURAL - Radianol 1991 is derived from a renewable vegetable raw material source. Oleon's manufacturing plants in Belgium and Germany convert non-GMO and non-palm vegetable fatty acids into dimer diol in a production process free of nickel catalyst.

Solvent:Radianol 1991	25:75	50:50	75:25
Sunflower oil	Soluble	Soluble	Soluble
Monopropylene glycol	Insoluble (2 phases)	Insoluble (2 phases)	Insoluble (2 phases)
Mineral oil	Soluble	Insoluble (Dispersible)	Insoluble (dispersible)
Isopropyl myristate	Soluble	Soluble	Soluble
Dimethicone	Insoluble (Dispersible)	Insoluble (Dispersible)	Insoluble (Dispersible)
Isoamyl laurate	Soluble	Soluble	Soluble
Caprylic/capric triglycerides	Soluble	Soluble	Soluble
Ethanol	Soluble	Soluble	Soluble
Glycerin	Insoluble (2 phases)	Insoluble (2 phases)	Insoluble (2 phases)

Table 1: *Compatibility of Radianol 1991 with oil.* ***SOLUBLE*** *= forms a clear and uniform solution initially or becomes clear and uniform after mixing at 55-60°C and remains clear and uniform after 24 hrs at RT;* ***INSOLUBLE*** *= forms two distinct phases even after heating to 55-60°C;* ***DISPERSIBLE*** *= uniform and cloudy, possibly separates after 24 hours*

HIGH WETTING POWER - Radianol 1991 is recommended to be used as a pigment disperser due to its **high wetting power**. Dimer diol can be used in color cosmetics. It has a pigment dispersion of 1,15 g/g of red oxide.

Graph 1: *Amount of emollient (gram) needed to solubilize 1 gram of pigments. Ref Isoamyl laurate / Jolee 7750 = 0.98g. Pigment : iron oxides C177491 Jojoba esters (coated)*

FORMULATION EXAMPLE

SILICONE-FREE HAIR CONDITIONER - OL0316

PHASE		INGREDIENT	INCI	% W/W
A		Varisoft® S 18		0.5
		Varisoft® TA 100	*Distearyldimonium chloride*	0.5
		Varisoft® BT 85	*Behentrimonium chloride*	0.3
		Methylparaben	*Methylparaben*	0.2
		Propylparaben	*Propylparaben*	0.1
		Radiacid 0909	***Isostearic acid***	**0.3**
		Jolee 7908	***Glyceryl laurate***	**0.3**
		Radiasurf 7447	***PEG-8 diisostearate***	**0.2**
		Radiasurf 7758	***Sorbitan isostearate***	**1**
		Tegosoft® E	*PPG-15 Stearyl ether*	2
		Cetyl alcohol	*Cetyl alcohol*	7
B		**Radia 7730**	***Isopropyl myristate***	**4**
		Radianol 1991	***Hydrogenated dilinoleyl alcohol***	**2**
		Rewopal® PIB1000	*Polyisobutene*	2
C		Lactate	*Lactate*	0.3
		Sodium EDTA	*Disodium EDTA*	0.1
		Deionized water	*Aqua*	To 100
D		Perfume		0.3

MANUFACTURING PROCEDURE

1 Heat Phase A and Phase C to 85°C, stir until the ingredients are uniformly dispersed.
2 Add Phase C to Phase A while stirring. Allow the mixture to cool to 65°C while stirring.
3 Add Phase B to the mixture (A+C) and cool to room temperature while stirring.

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