



# Spec-Chem Ind.

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## Kojic Dipalmitate

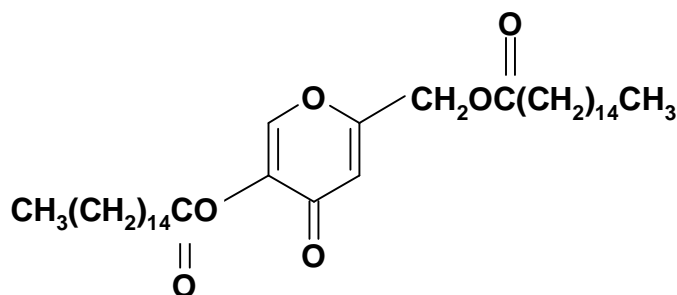
A. Technical Data Sheet

B. Formula for Kojic acid Dipalmitate



## A. Technical Data Sheet

CTFA Name:	Kojic Acid Dipalmitate
INCI Name:	Kojic Dipalmitate
Chemical Name:	2-palmitoyloxymethyl-5-palmitoyloxy- $\gamma$ - pyrone
CAS No.	79725-98-7
Molecular Formula:	$C_{38}H_{66}O_6$
Molecular Weight:	618.9
Structure:	



Kojic acid dipalmitate overcomes the defects which kojic acid usually has, such as the unstability to light and heat, and the color variation caused by formation of complexes with metallic ions. Kojic dipalmitate can preserve or promote the restraining power of kojic acid against tyrosinase activity TRP-1 activity, as well as delaying the melanogenesis.

### CHARACTERISTICS

#### 1. Skin Lightening.

Kojic Acid Dipalmitate offers more efficacious skin lightening effects. Compared with kojic acid, Kojic Acid Dipalmitate markedly enhances the inhibitory effects on tyrosinase activity, which prohibits the formation of melanin.

#### 2. Light and Heat Stability

Kojic Acid Dipalmitate is light and heat stable, while kojic acid tends to oxidize over time.

#### 3. pH Stability

Kojic Acid Dipalmitate is stable within a wide pH range of 4-9, which provides flexibility to formulators.



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## 4. Color Stability

Unlike kojic acid, Kojic Acid Dipalmitate does not turn brown or yellow over time for two reasons. First, kojic acid is not stable to light and heat, and tends to oxidize, which results in color change (often yellow or brown). Second, kojic acid tends to chelate with metal ions (e.g. iron), which often results in color change. On the contrary, Kojic Acid Dipalmitate is stable to pH, light, heat and oxidation, and does not complex with metal ions, which lead to color stability.

## MAIN SPECIFICATIONS

<b>Appearance:</b>	White powder
<b>IR Spectrum:</b>	Conforms to Reference
<b>Solubility:</b>	Soluble in ware alcohol. Mineral oil and esters
<b>Melting Point:</b>	93-97°C
<b>Moisture:</b>	1.0% max.
<b>Heavy Metals:</b>	20 ppm max.
<b>Assay (HPLC):</b>	98% min.

## APPLICATION

Skin care, sun care, skin whitening/lightening, treatment for pigmentary disorders such as age spots etc.

It dissolves in hot alcohols, white oils and esters.

The recommendatory amount used in cosmetics is 0.5-3%.

**Use level Skin care products:** 1-7%

## PACKAGE & STORAGE

1kg aluminum foil bag lined with a PE bag.

Store at room temperature in a cool and dry place.



## **B. Formula for Kojic acid Dipalmitate**

Oil phase	%
Beeswax	3
Stearicwax	9
Paraffin oil	7.5
Kojic Acid Dipalmitate	5
BHT	0.1
<b>Water Phase</b>	
Glycerin	1
Triethanol amin	0.6
EDTA	0.05
Sodium Bisulfite	0.1
<b>Process:</b> Heat oil phase and water phase to 68 ~ 70°C, then slowly put oil phase into water phase, homogenize it by agitating and keep 15 minutes.	