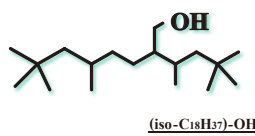
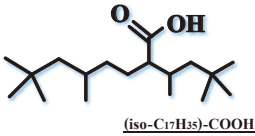




Highly branched Saturated alcohol & Saturated carboxylic acid

FINEOXOCOL®

| Product Name | FINEOXOCOL 180 | ISOSTEARIC ACID | ISOPALMITIC ACID RS8 | FINEOXOCOL 220-DEA |
|-----------------------------|--|--|--|---|
| Chemical Structural Formula |  (iso-C ₁₈ H ₃₇)-OH |  (iso-C ₁₇ H ₃₅)-COOH |  RSPO Certified |  (iso-C ₁₇ H ₃₅)-CON-(C ₂ H ₄ OH) ₂ |
| Appearance | Colorless Transparent | Colorless Transparent | Colorless Transparent | Transparent |
| Boiling Point (°C) | 295 | 311 | 311 | 225 |
| Flash Point (°C) | 160 | 167 | 174 | 229 |
| Freezing Point (°C) | < -90 | < -30 | -3 | < -30 |
| Viscosity (mPa·s, 30°C) | 220 | 820 | 29 | approx. 100 (Pa·s, 25°C) |

Application

Cosmetic ingredient



Monomer

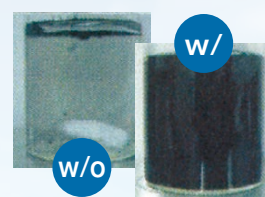
(Polyester, Acrylate, and so on)



Lubricant, Textile oil

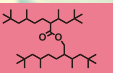
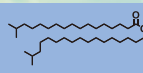


Surfactant (Dispersant)



Characteristics (Comparison of Highly with Much less branched)

◆ Better Compatibility

| Solvent |  |  |
|-------------------------------------|---|---|
| Ethanol | Y | N |
| Liquid paraffin | Y | Y |
| Olive oil | Y | Y |
| Dimethicone (100mm ² /s) | Y | N |

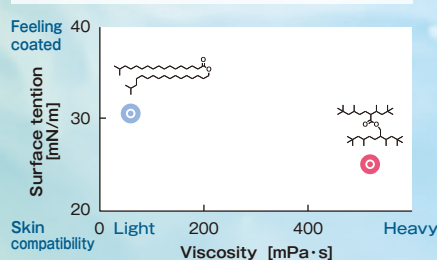
Concentration : 20, 50, 80 wt%

Y : Compatible at all 3 concentrations

N : Incompatible at all 3 concentrations

◆ Better Wettability = "Skin compatibility"

Viscosity*¹ vs. Surface tension*²



<Conditions>

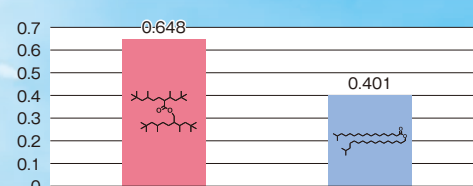
*1 Temperature : 25°C

*2 Temperature : 25°C

Equipment : Contact angle meter (Drop Master 500)

Solid sample : Glass slide

◆ Better Moistness*³



*3 Coefficient of Static friction (Fs) - Coefficient of Kinetic friction (Fk)

■ : Fs = 1.467, Fk = 0.819

■ : Fs = 1.312, Fk = 0.911

<Conditions>

Equipment : Static/Dynamic Friction Tester (TL201T)

Material : Artificial skin (Skin texture model)

Temperature : 33°C

Vertical load (g) : 50 Velocity (mm/sec) : 10

Distance (mm) : 20 Number of times : 20

◆ The structural formulae above are typical ones, not guaranteed ones.

◆ The values above are typical values, not specifications.

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