NEW AMIHOPE®
Amino Acid Lysine Based Functional Powder
and Its Application for Pressed Foundation

AMIHOPE® LL

AMIHOPE® OL

In-Cosmetics 2017, April 04

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Cosmetics Group
Material Development & Application Labs
Research Institute for Bioscience Products & Fine Chemicals
Ajinomoto Co., Inc.

Research Institute for Bioscience Products & Fine Chemicals
AJINOMOTO Co., Inc.
AMIHOPE®
Texture Modifier to impart smooth feel

<table>
<thead>
<tr>
<th>Fatty acid</th>
<th>L-Lysine</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Chemical Structure" /></td>
<td><img src="image" alt="Micrograph" /></td>
</tr>
</tbody>
</table>

R=C11 : AMIHOPE® LL : Lauroyl Lysine
R=C7 : AMIHOPE® OL : N-Capryloyl Lysine ← New!!!

Characteristics are...
- Insoluble in oil and water
- High adhesion property to skin
- High water repellency
- Soft, silky and emollient feel

Used for...
- Foundation
- Other Make-Up
- Skin Care
- Hair Care
Sensory Map

During application

Waxy

Dry

Moisture

After application

Light

AMIHOPE® LL

Zinc stearate

TiO₂

ZnO

Talc

Mica

Silicone powder

Boron nitride

Organic powder

Inorganic powder

Silicone powder

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Technical Data Sheet No.0501-0810
Outline

1. AMIHOPE® LL
   - Benefits in Loose Powder Foundation

2. AMIHOPE® OL- New Product !!
   - Benefits in Pressed Powder Foundation

3. Summary
Outline

1. AMIHOPE® LL
   ➢ Benefits in Loose Powder Foundation

2. AMIHOPE® OL-New Product !!
   ➢ Benefits in Pressed Powder Foundation

3. Summary
Desirable Functions in Foundation

1. AMIHOPE® LL

(1) Smoothness

(2) Adhesion Property

(3) Water Repellency

(4) Moisture Feel
1. AMIHOPE® LL

(1) Smoothness

AMIHOPE® LL has excellent lubricity

<table>
<thead>
<tr>
<th>Material</th>
<th>Dynamic friction coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIHOPE® LL</td>
<td>0.00</td>
</tr>
<tr>
<td>Talc</td>
<td>0.20</td>
</tr>
<tr>
<td>Mica</td>
<td>0.50</td>
</tr>
<tr>
<td>Boron nitride</td>
<td>0.40</td>
</tr>
<tr>
<td>Bismuth oxychloride</td>
<td>0.40</td>
</tr>
<tr>
<td>Nylon-12</td>
<td>0.30</td>
</tr>
<tr>
<td>PMMA</td>
<td>0.30</td>
</tr>
</tbody>
</table>

N=3, mean
1. AMIHOPE® LL

(2) Adhesion Property

AMIHOPE® LL conceals the pores and improves the skin texture

Panelist A | Panelist B | Panelist C
---|---|---
Visible spots | Control | PFD-18 (AMIHOPE® LL 2%)
Pores | Control | PFD-18 (AMIHOPE® LL 2%)
Texture | Control | PFD-18 (AMIHOPE® LL 2%)
Visible spots | Control | PFD-18 (AMIHOPE® LL 2%)
Pores | Control | PFD-18 (AMIHOPE® LL 2%)
Texture | Control | PFD-18 (AMIHOPE® LL 2%)

FLAW COVER RATIO (%)

GOOD

Image analysis by VISIA II

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Technical Data Sheet No.0501-0140
(3) Water Repellency

AMIHOPE® LL has excellent water repellency

Contact Angle (°) vs. Materials

- AMIHOPE® LL: 108°
- Zinc stearate: 102°
- Talc: 67°
- Mica: 0°
- Boron nitride: 88°
- Bismuth oxychloride: 7°

N=3, mean

Water Repellency

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Technical Data Sheet No.0501-0660
(4) Moisture Feel
-In Loose Powder Foundation-
AMIHOPE® LL improves moisture feel

During application
- Spreadability (smoothness)
- Adhesion
- Long lasting
- Coverage

After application
- Moisture Feel

Better than the Control

N=6

AMIHOPE®
5% 10% 20%

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Technical Data Sheet No.0501-0420
Outline

1. AMIHOPE® LL
   ➢ Benefits in Loose Powder Foundation

2. AMIHOPE® OL- New Product !!
   ➢ Benefits in Pressed Powder Foundation

3. Summary
AMIHOPE® LL imparts smoothness, good adhesion, natural coverage, non-drying feeling not like in-organic powder. But, does AJINOMOTO develop the other version of AMIHOPE®, which has more Light Feeling, and more Transparency?

Usage of AMIHOPE® LL in pressed powder foundation has been limited, because AMIHOPE® LL sometimes makes it hard to pick up the pressed foundation with a puff.
NEW AMIHOPE®

Fatty acid | L-Lysine
---|---

INCI name: N-Capryloyl Lysine

Characteristics are...
- particle size: 20~30μm
- hexagonal flat crystal

AMIHOPE® OL has, compared with AMIHOPE® LL,
1. Light feel with moisture feel after application
2. Natural transparency after application
3. Keep soft texture in pressed powder foundation
2. AMIHOPE® OL

Sensory Map

During application

Moisture

Waxy

Dry

After application

Light

AMIHOPE® LL

AMIHOPE® OL

Organic powder

Inorganic powder

Silicone powder

Zinc stearate

TiO₂

ZnO

Boron nitride

Talc

Mica

Silicone powder

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Technical Data Sheet No.0501-0810
AMIHOPE® OL makes natural transparency

Method: Added each powder to forearm in same volume
The higher concentration of AMIHOPE® LL brings…

More Emolliency

More Smoothness

Hard to Pick Up
Character of AMIHOPE® LL in Pressed Foundation

2. AMIHOPE® OL

Press

Sometimes...

Good Adhesion Property
→ Increase the Strength of Product

Solution!!!

AMIHOPE® OL

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AJINOMOTO Co., Inc.
### Pressed Powder Foundation

For Sensory Evaluation

<table>
<thead>
<tr>
<th></th>
<th>wt%</th>
<th>control</th>
<th>with Amihope® OL</th>
<th>with Amihope® LL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXTENDER PIGMENTS</strong></td>
<td>74.45</td>
<td>72.45/69.45</td>
<td>72.45/69.45</td>
<td></td>
</tr>
<tr>
<td><strong>WHITE PIGMENTS</strong></td>
<td>13.00</td>
<td>13.00</td>
<td>13.00</td>
<td></td>
</tr>
<tr>
<td><strong>COLOR PIGMENTS</strong></td>
<td>1.55</td>
<td>1.55</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td><strong>AMIHOPE® OL</strong></td>
<td>-</td>
<td>2.00/5.00</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>AMIHOPE® LL</strong></td>
<td>-</td>
<td>-</td>
<td>2.00/5.00</td>
<td></td>
</tr>
<tr>
<td><strong>OTHER OILS</strong></td>
<td>10.98</td>
<td>10.98</td>
<td>10.98</td>
<td></td>
</tr>
<tr>
<td><strong>OTHERS</strong></td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>
AMIHOPE® OL imparts smoothness, without less of ability to pick up.

Score of sensory evaluation

-1.0 -0.5 0.0 0.5 1.0

Moderate (5%LL) Good (5%OL)

Pick up & Smoothness

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Technical Data Sheet No.0501-0660
Sensory Evaluation

- AMIHOPE® OL
  - Smooth and silky feeling
  - High transparency and glossy

- AMIHOPE® LL
  - Good silky feeling
  - Moisture feel after application

During application

- Smoothness
- Transparency
- Glossy
- Silky

After application

- Moisturizing

Baseline (control)

Better than the Control

With 2% OL

With 2% LL

N=6

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Technical Data Sheet No.0501-0780
Outline

1. AMIHOPE® LL
   ➢ Benefits in Loose Powder Foundation

2. AMIHOPE® OL-New Product !!
   ➢ Benefits in Pressed Powder Foundation

3. Summary
# Summary of AMIHOPE®

## Benefits of AMIHOPE®

<table>
<thead>
<tr>
<th></th>
<th>(1) Adhesion Property</th>
<th>(2) Water Repellency</th>
<th>(3) Moisture Feel</th>
<th>(4) Smoothness</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIHOPE® OL</td>
<td>Good</td>
<td>Very High</td>
<td>High</td>
<td>Good</td>
</tr>
<tr>
<td>AMIHOPE® LL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Difference of AMIHOPE®

<table>
<thead>
<tr>
<th></th>
<th>Feeling On Skin</th>
<th>Appearance</th>
<th>Ability to pick up</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIHOPE® OL</td>
<td>Light Feel</td>
<td>High transparency and Glossy</td>
<td>Good</td>
</tr>
<tr>
<td>AMIHOPE® LL</td>
<td>Waxy Feel</td>
<td>Moderate transparency and Matte</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
3. Summary

Summary of AMIHOPE®

Dosage Recommendation

<table>
<thead>
<tr>
<th></th>
<th>Pressed powder foundation</th>
<th>Loose Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIHOPE® OL</td>
<td>2~20</td>
<td>2~30</td>
</tr>
<tr>
<td>AMIHOPE® LL</td>
<td>~5</td>
<td>2~20</td>
</tr>
</tbody>
</table>
### 3. Summary

**AMIHOPE® BRAND**

<table>
<thead>
<tr>
<th></th>
<th>Fatty acid</th>
<th>L-Lysine</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIHOPE® LL</td>
<td><img src="image1.png" alt="Fatty acid AMIHOPE® LL" /></td>
<td><img src="image2.png" alt="L-Lysine AMIHOPE® LL" /></td>
</tr>
<tr>
<td>AMIHOPE® OL</td>
<td><img src="image3.png" alt="Fatty acid AMIHOPE® OL" /></td>
<td><img src="image4.png" alt="L-Lysine AMIHOPE® OL" /></td>
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</table>

**AMIHOPE® OL has, compared with AMIHOPE® LL,**

1. Light feel with Moisture feel after application
2. Natural transparency after application
3. Keep soft texture in pressed powder foundation
Thank YOU !!

Please visit our Booth!

Booth No. F70

We stand-by some samples of AMIHOPE® OL, LL!