Luna-Wing
Light-cured Indirect Composite Resin

YAMAKIN
A Reliable Brand Manufacturer of Dental Materials
Luna-Wing will change your way of thinking about composite resin.

This resin is just a pleasure to work with.

Of course, Luna-Wing isn’t only a pleasure to work with; it’s also a product of the most outstanding quality.

Luna-Wing is just a pleasure to work with.

Luna-Wing is a light-cured indirect composite resin, developed using nano-technology as a basis, and exhibiting superior properties along with excellent workability, as well as fabulous aesthetics with a variety of color products. Luna-Wing makes it possible to produce high-quality prostheses in a short working time.

Luna-Wing has been carefully examined under the heading of Biological Evaluation of Medical Devices, as stipulated under ISO10993. In addition it has also been thoroughly examined through various safety tests based on cell, tissue and genetic technology. Its biocompatibility has been proven.

For light-curing this product, use a dental light-curing machine equipped with a halogen lamp, xenon lamp, metal halide lamp or LED, with an effective wavelength of 400-500 nm.

Made by Shigeru Mekoda, Dental Inc., Fukuoka Prefecture, Japan.
Winner of the First Prize in the Technical Competition, General Knowledge Section of the 30th Meeting of the Japanese Academy of Dental Technology and the 4th International Congress of Dental Technology. This design is made using Luna-Wing.
Nano Technology

Nanofiller & Nano Technology

Nano-Technology is carried out on atoms and molecules at a scale of under 1 billionth of one meter.

Luna-Wing is an indirect composite resin exploiting the full potential of Nano-Technology, and has become one of the highest-density filler products on the market by using a mix of different-sized inorganic fillers. However, simply having the highest standard of filler material does not directly guarantee good quality. It is important to achieve a good balance between excellent physical properties and usability for technicians.

Luna-Wing not only fulfills the market’s major demands in terms of properties such as hardness, bending strength, and abrasion resistance at the level of most of other products in the market, but has also garnered high praise from many technicians for factors difficult to express in numeric values, such as forming, handling, polishing abrasability, and color reproducibility.

Image of Luna-Wing material structure

Superb Physical Properties through Nano-technology

The physical properties of dental materials are a crucial concern. Luna-Wing is designed with an outstanding balance of dimension of fillers, filling rate, and adhesive strength of resin matrix and fillers. As a result, Luna-Wing exhibits high Vickers hardness and flexural strength, which decreases wear and polymerization shrinkage.

Water Sorption and Solubility

Water sorption and solubility causes stains, smells and deterioration of strength. Luna-Wing exhibits much lower water sorption and solubility than the standard values stipulated in ISO, which proves the safety of Luna-Wing in oral contexts.

Extremely Low Shrinkage - Only 1.8%

Composite materials shrink while hardening. This is referred to as polymerization shrinkage. This phenomenon cannot be avoided. Shrinkage may cause cracks and deformations. A high material shrinkage level also causes secondary caries.

However, Luna-Wing exhibits only 1.8% shrinkage, making it possible to maintain better quality over long periods of time. In addition, no major cracks are apparent after 5,000-cycle thermal testing (4 and 60 degrees Celsius). This proves that Luna-Wing is a reliable and highly beneficial material.

Abrasion Resistance for Everyday Comfort

Cleaning teeth is a basic part of everyday oral hygiene; the number of strokes a brush makes in brushing teeth can reach an amazing 30,000 times a year. Deteriorated prostheses affect not only aesthetic aspects but also the buildup of plaque.

Luna-Wing contains complex fillers or organic fillers and inorganic fillers, at a high density. It exhibits good abrasion resistance and surface smoothness. All the inorganic nanofillers are spherical and minute, reducing the wear of the opposing teeth.
Extensive Color Variation

Shade Matching
Luna-Wing is designed to match the most popular shade guide in current dentistry.

Line-up for Precise Characteristics
We have a great line-up of 9 Effect body resins to characterize colors such as discolored teeth. Our extensive range of Stain colors comes to a total of 21 colors, which are for internal use. The Stain product is of a paste type, while Stain Clear is a liquid type. Stain Clear can be used on its own and can also be mixed with other stains to adjust colors. The 3 of vivid Stain colors give you infinite possibilities to create new colors by mixing with other stains.

Effect line-up

Stain line-up

A variety of colors can be created from three basic colors.

3 colors

3 colors + White

3 colors + Black

Natural Fluorescence
Natural teeth exhibit fluorescence, emitting ultraviolet light. Prostheses also need to exhibit the same characteristics. Luna-Wing is not simply given a generic form of fluorescence; rather, the fluorescence of natural teeth has been painstakingly achieved.

Fluorescence of Natural teeth (upper) and Luna-Wing (lower)

Harmonized Shade
We’ve slightly toned down the redness of Luna-Wing Shade. Easy to use, even for first-time users of Luna-Wing. Hard type is also available for Enamel line-up.

Whitening Shade
The desire to have white teeth like fashion models and sport athletes is a given today, and teeth whitening is now a matter of course, especially among younger women. Luna-Wing is already responding to this trend. The A0 Shade of Luna-Wing is whiter than the A1 shade of the most commonly used shade guide.

Luna-Wing’s A0 Shade is whiter than found in the normal shade guide.

Opaque Dentine
When the thickness of layering is not sufficient, an opaque color tends to be visible through Dentine, and reproduction of color tone is sometimes difficult. Luna-Wing has a range of Opaque Dentine which enables the required color tone to be expressed.

Example of Opaque Dentine

Dentine (0.3mm) ≥ E3

Turbidity Optically Stable
Many dental technicians have experienced the situation of crafting an artificial tooth, only to find that there is a visible line between the metal backing and the composite resin. This is because natural light penetrates the incisal area and the metal frame becomes visible. Luna-Wing exhibits natural transparency and optimal turbidity at the same time with naturally reflected light. Even where sufficient thickness of layer has not been secured, light scatters through the composite resin and conceals the metal line.

Comparison of turbidity

High Turbidity

Low Turbidity
**Basic Layering Procedure**

1. **Apply Primer Paste and Invisible Opaque, and Light Cure**
   - Apply Primer Paste evenly with a flat brush. Leave it for 120 sec., to enhance bonding strength. Light cure for about 10 sec. with LED CURE Master® for about 30 sec. with other general light curing machines. Then apply Invisible Opaque to cover retention beads. Apply thirty in marginal area with no beads. Light cure for about 10 sec. with LED CURE Master® for about 30 sec. with other general light curing machines. Primer paste is a bonding material, but at the same time it can be used as Invisible Opaque, the use of Invisible Opaque is not necessary. In this case, Primer Paste should be applied thickly enough to cover retention beads. Primer Paste can not be used for gold alloys.

2. **Apply Opaque and Light Cure**
   - Apply Opaque with a brush and light cure for about 30 sec. with LED CURE Master® for about 180 sec. with other general light curing machines. Repeat this step until the metal color is fully covered.

3. **Apply Dentine and Light Cure**
   - Apply and form Dentine, considering the contours and shape of the dentine core, then light cure for about 10 sec. with LED CURE Master® for about 60 sec. with other general light curing machines.

4. **Apply Enamel and Light Cure**
   - Apply and form Enamel, considering the final crown contours, then light cure for about 10 sec. with LED CURE Master® for about 60 sec. with other general light curing machines. As a final light-curing step, light cure for another about 90 sec. with LED CURE Master® for about 180 sec. with other general light curing machines.

5. **Polishing and Glazing**
   - After adjusting the contours, polish with glazing with a C&B diamond polisher or a C&B nano diamond polisher using a rotating brush, a fabric buff and etc.

6. **Completion**

**Effective Shape Preservation of Internal Structures**

Consistency of body resin affects workability at the work site. Especially, internal structures such as the dentine core require optimal consistency to keep form. Luna-Wing exhibits such good shape preservation that the dentine edges even of bridges or connected teeth can maintain shape during light curing. This is especially true of mamelons.

**Easy Handling & Great Workability**

**Primer Paste Viscosity**

As Primer Paste has optimal viscosity, it flows into the undercut area of retention beads easily and it enhances the adhesive strength mechanistically. Also, the whitish translucency of Primer Paste allows for an effective curing undercut area. The white color also works as a shading for the metal, so that opaque layering can be kept thinner in order to avoid immature curing. Apply Primer Paste to cover 100-200μm diameter retention beads.

**No Entrapping of Air in Enamel**

Luna-Wing Enamel, Translucent and Effect are designed to 30% less viscosity than body resins such as Dentine, Cervical and Opaque Dentine. This consistency prevents entrapping of air and it fills up the space around mamelons easily.

**Hard Type Selection**

There are hard type selections for our Enamel, Trans Enamel and Translucent products. The consistency of Hard Type is very close to that of Dentine.
Luna-Wing Products Line-Up

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Invisible Opaque</strong></td>
<td>A low-elastoity opaque resin to enhance physical bonding strength. 2.3ml</td>
</tr>
<tr>
<td></td>
<td>Infiltrate Opaque 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Infiltrate Opaque 5g 10g</td>
</tr>
<tr>
<td><strong>Opaque</strong></td>
<td>Opaque for metal surface coating. Opaque is used to cover metal color.</td>
</tr>
<tr>
<td></td>
<td>Opaque for metal surface coating.</td>
</tr>
<tr>
<td></td>
<td>Opaque is used to cover metal color.</td>
</tr>
<tr>
<td><strong>Special Opaque Color</strong></td>
<td>Body resin to prevent permeation of opaque color when it is used as a buccal or lingual build-up. Can be used in anterior areas where there is a large thickness. 2.3ml</td>
</tr>
<tr>
<td></td>
<td>Special Opaque Color 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Special Opaque Color 5g 10g</td>
</tr>
<tr>
<td><strong>Dentine</strong></td>
<td>Slightly toned down the redness of basic Opaque Dentine. For harmonizing with natural teeth and faithfully reproducing shade guide. 2.3ml</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>A</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>A</strong> 5g 10g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>B</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>B</strong> 5g 10g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>C</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>C</strong> 5g 10g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>D</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>D</strong> 5g 10g</td>
</tr>
<tr>
<td><strong>Cervical</strong></td>
<td>Body resin for natural color expression around cervical area. 2.3ml</td>
</tr>
<tr>
<td></td>
<td>Cervical <strong>A</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Cervical <strong>A</strong> 5g 10g</td>
</tr>
<tr>
<td></td>
<td>Cervical <strong>B</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Cervical <strong>B</strong> 5g 10g</td>
</tr>
<tr>
<td></td>
<td>Cervical <strong>C</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Cervical <strong>C</strong> 5g 10g</td>
</tr>
<tr>
<td></td>
<td>Cervical <strong>D</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Cervical <strong>D</strong> 5g 10g</td>
</tr>
<tr>
<td><strong>Dentine</strong></td>
<td>Body resin to express dentine. 2.3ml</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>A</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>A</strong> 5g 10g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>B</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>B</strong> 5g 10g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>C</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>C</strong> 5g 10g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>D</strong> 10g 20g</td>
</tr>
<tr>
<td></td>
<td>Dentine <strong>D</strong> 5g 10g</td>
</tr>
</tbody>
</table>

**Base**

Body resin for the potted part of bridge, etc. 2.3ml

- **Special Primer**
  - Translucent Primer
  - Multi Primer
  - Multi Primer Paste

**Translucent**

Characterizing body resin to express discolored tooth. Effectively expresses color tone in a thin layer. 1ml

- **Effect**
  - Translucent Paste
  - Special Primer

**Stain**

- **Stain**
  - Stain Primer
  - Stain Primer Paste

**Multi Primer Paste**

Use for additional layering or retouching. 5ml

- **Multi Primer Paste**
  - Multi Primer Paste

**Curing Time for Luna-Wing and TWJNY**

- **Curing Time**
  - 10 sec. 90 sec. 180 sec.
  - 30 sec. 180 sec.
  - 60 sec. 180 sec.

Luna-Wing shade color table

- **Basic Shade**
  - A1 A2 A3 A4 A5 A6 A7 A8 A9 B1 B2 B3 B4 B5 B6 B7 B8 B9 C1 C2 C3 C4 C5 C6 C7 C8 C9 D1 D2 D3 D4 D5 D6 D7 D8 D9

- **Harmonized Shade**
  - There are hard type selections for Enamel, Trans Enamel and Translucent products.

- **Enamel**
  - E2 Hard, E1 Hard, E2 Hard, E3 Hard, E4 Hard

- **Enamel HS**
  - E2 HS Steel, E3 HS Hard

- **Trans Enamel**
  - H/F Hard, T/Hard, LTV Hard, CT Hard

- **Translucent**
  - H/F Hard, T/Hard, LTV Hard, CT Hard

**LED CURE Master**

Curing apparatus for dental technique
Luna-Wing

Regular Set

This set is for users who would like to use all kinds of shade colors.

<table>
<thead>
<tr>
<th>Invisible Opae 2.3ml</th>
<th>O</th>
<th>Opaque 2.3ml</th>
<th>O, DA, DA3, DA3.5, DA4, DA4.5, DA5, DA5.5, DA6, DA6.5, DA7, DA7.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Opae Color 2.3ml</td>
<td>O, M0</td>
<td>Cervical 5g (3ml)</td>
<td>DA1, DA2, DA3, DA4, DA5, DA6, DA6.5, DA7, DA7.5</td>
</tr>
<tr>
<td>Dentine 5g (3ml)</td>
<td>DA2, DA3, DA3.5</td>
<td>Enamel 5g (3ml)</td>
<td>E2, E3, E4</td>
</tr>
<tr>
<td>Translucent 5g (3ml)</td>
<td>T</td>
<td>Multi Primer Paste (2ml)</td>
<td></td>
</tr>
</tbody>
</table>

This kit is composed of 12 kinds of color stain.

Stain Clear

Stain Kit

Stain Clear

| Stain/ml | Blue, Yellow, Red, Orange, Dark Orange, White, Black, Gray, Brown, A, D1, B, D2 |

Mixing Papers

Pallets

Flat Brushes

Round Brushes

Harmonized Shade

Opaque Dentine HS 3 | Dentine HS 3 | Enamel HS 2

Intro Set

This set is for user who would like to try Luna-Wing.

<table>
<thead>
<tr>
<th>Invisible Opae 2.3ml</th>
<th>O</th>
<th>Opaque 2.3ml</th>
<th>DA3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Opae Color 2.3ml</td>
<td>O, M0</td>
<td>Cervical 5g (3ml)</td>
<td>DA1</td>
</tr>
<tr>
<td>Dentine 5g (3ml)</td>
<td>DA2</td>
<td>Enamel 5g (3ml)</td>
<td>E3</td>
</tr>
<tr>
<td>Translucent 5g (3ml)</td>
<td>T</td>
<td>Multi Primer Paste (2ml)</td>
<td></td>
</tr>
</tbody>
</table>

Accessories:

Flat Brush(2), Round Brush(2), Mixing Paper(2), Pallets(2) with shade cover(1)

Enamel can be changed into Hard type, HS type or HS Hard type.

Starter Set

This set is composed of A2, A3 and A3.5 shade.

<table>
<thead>
<tr>
<th>Invisible Opae 2.3ml</th>
<th>O</th>
<th>Opaque 2.3ml</th>
<th>DA, DA3, DA3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Opae Color 2.3ml</td>
<td>DA, M0</td>
<td>Cervical 5g (3ml)</td>
<td>DA1, DA2</td>
</tr>
<tr>
<td>Dentine 5g (3ml)</td>
<td>DA2, DA3, DA3.5</td>
<td>Enamel 5g (3ml)</td>
<td>E3</td>
</tr>
<tr>
<td>Translucent 5g (3ml)</td>
<td>T</td>
<td>Multi Primer Paste (2ml)</td>
<td></td>
</tr>
</tbody>
</table>

Accessories:

Flat Brush(2), Round Brush(2), Mixing Paper(2), Pallets(2) with shade cover(1)

Enamel can be changed into Hard type, HS type or HS Hard type.

Solid Products
Luna-Wing will change your way of thinking about composite resin. This resin is just a pleasure to work with. Of course, Luna-Wing isn’t only a pleasure to work with; it’s also a product of the most outstanding quality.

For a Well-Grounded Safety System

Evaluation of dental material safety is designated by the Pharmaceutical Affairs Law in Japan and ISO 10993 overseas. We fully comply with these regulations and standards. In addition, in order to secure a higher level of safety, we set up the Biological Science Safety Laboratory in collaboration with the Department of Oral and Maxillofacial Surgery, Kochi Medical School, Kochi University, Japan. We have been continuously researching materials in collaboration with other medical and dental colleges and research institutes.

Quality Management System for Global Standard Compliance

We were audited and approved by the designated third party TÜV SÜD, Germany, in order to obtain ISO 13485 (Quality Management System of Medical Devices) certification. We have realized an advanced high-level quality management system as a manufacturer of Controlled Medical Devices.

Strict Hygienic Control

From research and development to production, YAMAKIN has established a consolidated management system. Especially, resin products are manufactured under strict hygienic control so as to avoid any dust contamination.

Monitoring of Safety Information

Regarding safety information from the production management stage through to safety management post-marketing surveillance: In order to judge quality standards objectively, we set up an independent sales monitoring system, under a marketing supervisor-general. We have assigned a quality assurance manager to the system, who is responsible for Good Quality Practice; and we have also assigned a safety management supervisor, who is responsible for Good Vigilance Practice. We monitor all information reported to us from clinical practices.