

After UV Cure OCA  
**MGU Series**

# UV Cure May Clean Gel

**This is a method of UV secondary cure after lamination of optical panels.**

**Bonding panel with transparent adhesive sheet and UV device.**

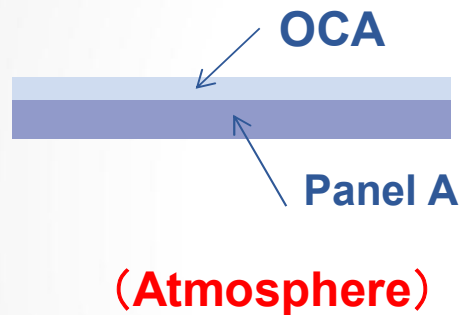
# Comparison of lamination methods

| Method              | Liquid   | Adhesive Sheet  | UV Cure May Clean Gel  |
|---------------------|--|---|--|
| Material            | OCR  | OCA   | OCA  |
| Device              | Dispenser<br>Vacuum equipment<br>UV irradiation device | OCA lamination device<br>Vacuum lamination device<br>Autoclave device | OCA lamination device<br>Vacuum lamination device<br>Autoclave device<br>UV irradiation device |
| Peel strength       | ◎  | ○   | ◎  |
| Ink step absorption | ◎  | ×   | ◎  |
| Workability         | ×  | ◎   | ◎  |

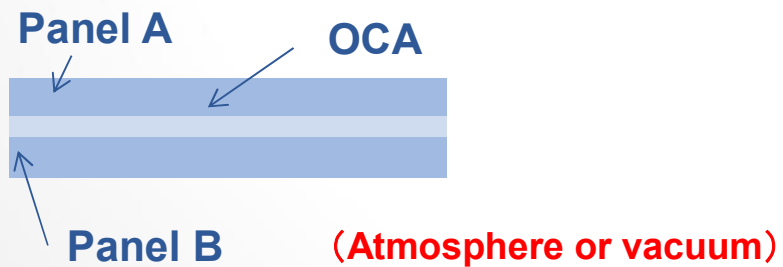
**The new method is a way to solve the problem**

# Process

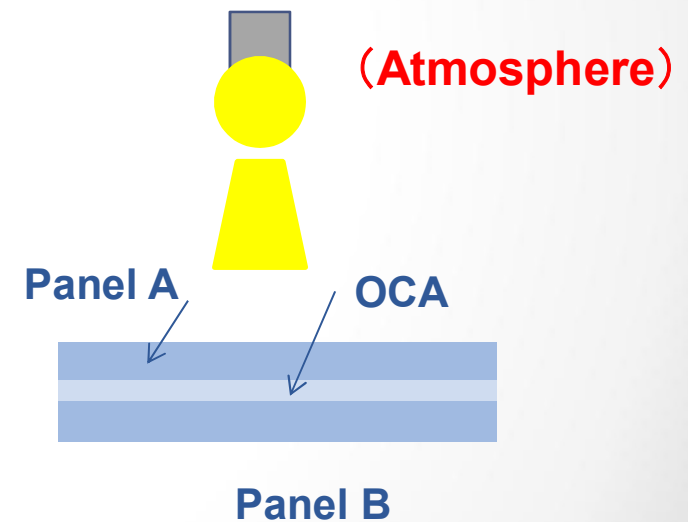
## 1) OCA Lamination



## 2) Panel Lamination



## 3) UV irradiation



Recommended UV dose: 2000 mJ / cm<sup>2</sup>  
Wavelength: 365 nm  
Irradiation output: 160 W / cm

# MGU Series

| Product | Thickness (mm) | Peel strength (Glass) | Peel strength (Glass) | Optical properties   |          |    |     |                  |
|---------|----------------|-----------------------|-----------------------|--|----------|----|-----|------------------|
|         |                |                       |                       | Total light transmittance (%)  | Haze (%) | a* | b*  | Refractive index |
| MGU10   | 0.1            | 16                    | 17.5                  | 92 (※99)<br>※ ( ) Calculated value without interface reflection loss | 0.3      | 0  | 0.6 | 1.47             |
| MGU12.5 | 0.125          | 17                    | 18                    |  |          |    |     |                  |
| MGU15   | 0.15           | 18                    | 20                    |  |          |    |     |                  |
| MGU17.5 | 0.175          | 19                    | 22                    |  |          |    |     |                  |
| MGU20   | 0.2            | 20                    | 21.5                  |  |          |    |     |                  |
| MGU25   | 0.25           | 20.5                  | 22                    |  |          |    |     |                  |
| MGU35   | 0.35           | 26                    | 27                    |  |          |    |     |                  |

# MGU Series

|                   |        | MGU25 0.25t    |               |
|-------------------|--------|----------------|---------------|
| Adherend          | Unit   | Before UV Cure | After UV Cure |
| PC                | N/25mm | 18.5           | 33            |
| Glass             |        | 20.5           | 25            |
| Growth rate       | %      | 2455           | 1058          |
| Breaking strength | N/10mm | 0.6            | 1.6           |

✂ Adhesive measurement method



**Adhesion is strengthened by UV curing**



# Dielectric constant properties

| Product | Dielectric constant (Frequency) | Test method | Value |
|---------|---------------------------------|-------------|-------|
| MGU     | 1MHz                            | JIS C 2131  | 3.47  |
|         | 10MHz                           |             | 3.42  |
|         | 100MHz                          |             | 3.14  |
|         | 1000MHz                         |             | 2.86  |

Measuring method: contact electrode method  
Measuring device : Agilent 4294A(4284)



# Reliability Data

| Item                           |                              | Optical properties |              |                      |                          |
|--------------------------------|------------------------------|--------------------|--------------|----------------------|--------------------------|
|                                |                              | Before             | 85°C × 1000h | 70°C × 90%RH × 1000h | -40°C ↔ 85°C<br>400Cycle |
| Optical properties             | TT                           | 92                 | 92.5         | 92.0                 | 92.1                     |
|                                | Haze                         | 0.3                | 0.6          | 0.8                  | 0.9                      |
|                                | a*                           | 0                  | 0.55         | 0.53                 | 0.46                     |
|                                | b*                           | 0.6                | 0.62         | 0.67                 | 0.65                     |
| Peel strength (Glass)          | N/25mm<br>MGU17.5<br>(Glass) | 22                 | 22.9         | 17.2                 | 19.7                     |
| Change in ITO resistance value | 85°C × 85%RH × 1000h         |                    | MGU          | ≤5%                  |                          |

# End of presentation

---

User is responsible for determining whether the KGK product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a KGK product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a KGK product. Given the variety of factors that can affect the use and performance of a KGK product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the KGK product to determine whether it is fit for a particular purpose and suitable for the user's method of application. KGK make no warranties on above data.

KGK Chemical Corporation.  
〒359-0011  
940 Minami-nagai Tokorozawa city  
Saitama pref. JAPAN  
phone +81-4-2944-5151  
Mail [postbox@kgk-tape.co.jp](mailto:postbox@kgk-tape.co.jp)