

KOBELITE LAMINATE

KEL-571 (Only non-woven aramid structure)

KEL-973 (Composite structure of non-woven aramid and polyester)

Non-woven aramid epoxy laminates

■ Features

- Non woven aramid fiber prevents scratch.
- Aramid fiber contributes to long life of polishing machine.
- Prevents crash with high tear strength.

■ Applications

- Retaining board for polishing

■ Polishing products

- Hard disk, wafer, lens, liquid crystal display

■ Standard Specifications

| Part Number | Type | Master Size (Length×Width) (mm) | Actual Thickness (mm) |
|-------------|------|--|-----------------------|
| KEL-571 | — | $1020^{+5}_{-0} \times 1020^{+5}_{-0}$ | 0.2 |
| | | | 0.3 |
| | | | 0.4 |
| | | | 0.5 |
| | | | 0.6 |
| | | | 0.7 |
| | | | 0.8 |
| | | | 1.0 |
| | | | 1.2 |
| | | | 1.5 |
| | | | 1.6 |
| KEL-973 | — | $1020^{+5}_{-0} \times 1020^{+5}_{-0}$ | 2.0 |
| | | | 0.6 |
| | | | 0.8 |
| | | | 1.0 |
| | | | 1.2 |
| | | | 1.5 |
| 1.6 | | | |
| 2.0 | | | |

※Please consult in advance for production support.

■ Characteristics

| Item | Condition | Unit | Actual Value | | |
|-------------------------------------|--------------------|--------------------|--|----------------|----------------|
| | | | KEL-571 | KEL-973 | |
| Withstand Voltage Vertical To Layer | C-90/20/65 | kV/mm | — | — | |
| Insulation Resistance | C-90/20/65 | Ω | 1×10 ¹⁴ ~1×10 ¹⁵ | — | |
| | C-90/20/65+D-2/100 | | 5×10 ¹³ ~5×10 ¹⁴ | — | |
| Dielectric Constant | (1MHz) | C-90/20/65 | 4.0~4.2 | — | |
| | | C-90/20/65+D-24/23 | 4.1~4.3 | — | |
| Dissipation Factor | (1MHz) | C-90/20/65 | 0.020~0.022 | — | |
| | | C-90/20/65+D-24/23 | 0.021~0.023 | — | |
| Flexural Strength | Length | A | N/mm ² | 330~400 | 200~220 |
| | Width | | | 300~380 | 170~190 |
| Flexural Modulus | Length | A | kN/mm ² | 8.4~8.6 | 7.4~7.6 |
| | Width | | | 7.8~8.0 | 6.6~6.8 |
| Compressive Strength | vertical | A | N/mm ² | — | — |
| | parallel | | | — | — |
| Izod Impact Strength | A | J/cm | — | — | |
| Cleavage Strength | A | kN | — | — | |
| Air Flammability | E-2/180 | — | No abnormality | No abnormality | |
| Specific Gravity | A | — | 1.4~1.5 | 1.5~1.6 | |
| Chemical Resistance | HCl | (*1) | — | No abnormality | No abnormality |
| | NaOH | | | No abnormality | No abnormality |
| Flammability | (UL-94) | A | — | — | |
| Aptitude Punching Temperature | A | °C | — | — | |
| CTE *2 | X | (30~80°C) | ppm/°C | 6~8 | 27~30 |
| | Y | | | 8~10 | 38~40 |
| | Z | | | 105~120 | — |

The contents of this report are based on the results of experiments conducted by HITACHI CHEMICAL and do not represent a guarantee of the values for each property. Before use, please study its properties, methods for using it, etc., using this data as a reference.

*1) Concentration:3±0.2%,20±2°C. Appearance checked with naked eyes after soaking for 24hrs.

*2) Heating Rate:10°C/min.

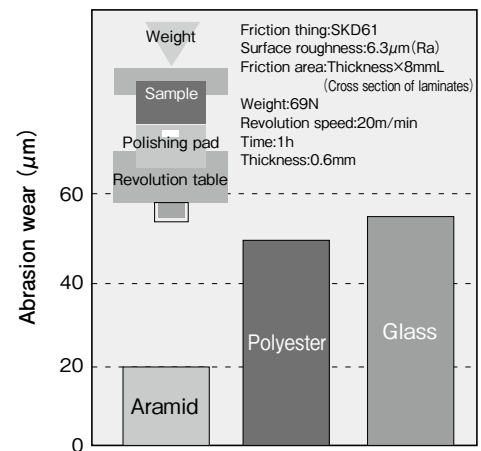
● Table of general characteristics

| Item | Part Number | KEL-571 | KEL-973 | KEL-GEF (R) |
|---------------------------------------|----------------------|---------------------|---------|-------------|
| | | Tear strength(N/mm) | 30 | 38 |
| Tencile strength(N/mm ²) | | 250 | 120 | 320 |
| Flexural strength(N/mm ²) | | 330 | 220 | 600 |
| Flexural modulus(kN/mm ²) | | 8.5 | 7.5 | 22 |
| Chemical Resistance* | Hydrochloric acid 3% | OK | | |
| | Nitric acid 15% | OK | | |
| | Sodium hydroxide 3% | OK | | |

The above values are measurements taken from samples 1.0mm thickness, but not guaranteed.

(*)Decided concentration, 20±2°C. 24hour dipping.

● Result of wear resistance



The abrasion rate of aramid is less than a half of glass epoxy and polyester laminates.