Effective Date: March 25, 2019

# Thermal Transfer Printable Self-Laminating Translucent Vinyl Tape (Vinyl Self-Laminating Overwrap/ Cable Wrap)

### **PRODUCT SPECIFICATIONS:**

### **Description:**

| Print Technology                    | Thermal Transfer   |
|-------------------------------------|--|
| Material Type                       | Translucent vinyl  |
| Adhesive                            | Acrylic  |
| Standard Colors                     | Translucent film with white printable area               |
| Finish                              | Self-laminated format                                    |
| Service Temperature Range           | -40°C to 90°C  |
| Recommended Application Temperature | 5°C to 35°C  |
| Storage Condition                   | From -10°C to 40°C and from 30% to 80% Relative Humidity |

#### Thickness (mm)

|                 | Transparent |  |
|-----------------|-------------|--|
| Substrate       | 0.050       |  |
| (Colored layer) | (0.010)     |  |
| Adhesive        | 0.015       |  |
| Liner           | 0.087       |  |
| Total           | 0.172       |  |

#### **APPLICATIONS**

Wire and cable identification

### **REGULATORY/AGENCY APPROVALS**

**RoHS**: Epson Translucent Vinyl Tape (Self-laminating cable wrap tape) is compliant to RoHS Standards to Directive (2011/65/ EU) and (Annex II (EU) 2015/863) established on June 8, 2011.

## Target model

| SKU                | Ink color/tape color        |  |
|--------------------|-----------------------------|--|
| LK-6WBVS, LK-7WBVS | Black on White/ Transparent |  |

## **PROPERTIES**

| Properti                  | es         | Test method                            | Average result                       |
|---------------------------|------------|--|--------------------------------------|
| <u>Adhesive</u>           |            |  |                                      |
| Adhesion to               | Time       |  |                                      |
| Stainless Steel           | 20 min.    | Compliance to JIS (Japanese            | 17.47 N/25mm                         |
|                           | 96 hours   | Industrial Standards) Z 0237(2000),    | 27.91 N/25mm                         |
| Polypropylene             | 20 min.    | pressure-sensitive adhesive tapes      | 6.72 N/25mm                          |
|                           | 96 hours   | and sheets testing.                    | 8.86 N/25mm                          |
| Glass                     | 20 min.    | Peeling angle 180 degrees / peeling    | 10.76 N/25mm                         |
|                           | 96 hours   | speed 300mm/min                        | 11.16 N/25mm                         |
| Vinyl chloride            | 20 min.    |  | 16.21 N/25mm                         |
|                           | 96 hours   |  | 15.87 N/25mm                         |
| Acrylic                   | 20 min.    |  | 10.42 N/25mm                         |
|                           | 96 hours   |  | 13.69 N/25mm                         |
| <u> Shear / Displacem</u> | <u>ent</u> | Putting on glass plate (adhesion area  | 53,906 sec.                          |
|                           |            | is 12 x 20 mm), then load 1kg to the   |                                      |
|                           |            | label for 1 hour                       |                                      |
| <u>Tack</u>               |            | Probe tack test with dia. 5mm probe    | 5.3 N                                |
| UV Light resistand        | <u>ce</u>  | Putting on stainless plate, then       | No visible effect, such as peeling   |
|                           |            | irradiance 40W/m², B.P.T 63 degrees    | / cracking / discoloration / printed |
|                           |            | C and 50% RH, for 390 hours in         | text removing.                       |
|                           |            | Super Xenon Weather Meter (Suga        |                                      |
|                           |            | SX75)                                  |                                      |
| <u>Weatherability</u>     |            | Repeat below 1 to 4 for 55 hours / 110 | No visible effect, such as peeling   |
|                           |            | hours.                                 | / cracking / discoloration / printed |
|                           |            | 1. Irradiation for 10 hours            | text removing.                       |
|                           |            | 1.24kW/m² irradiance, B.P.T 63         |                                      |
|                           |            | degrees C and 50% RH                   |                                      |
|                           |            | 2. Spray plain water for 1 minute      |                                      |
|                           |            | 3. Dark and condensation for 1 hour    |                                      |
|                           |            | 4. Spray plain water for 1 minute      |                                      |
|                           |            | 55 hours / 110 hours acceleration test |                                      |
|                           |            | equals to 1 year / 2 years of          |                                      |
|                           |            | environment of Japan in metaling       |                                      |
|                           |            | weather meter machine (SUGA M6T).      |                                      |
| Abrasion Resistance       |            | 50 cycles on 500gf pressure by         | No visible effect, such as printed   |
|                           |            | Japanese 10 Yen coin                   | text removing                        |
|                           |            | 50 cycles on 2kgf pressure by plastic  |                                      |
|                           |            | eraser.                                |                                      |

#### **CHEMICAL/ SOLVENT RESISTANCE**

| Chemical reagents          | Test method                                  | Results   |
|----------------------------|--|-----------|
| Trichloroethane            | Paste the labels on glass rods of Φ3mm       | Failed    |
| Sodium Hypochlorite        | × 100mm, then sink in each chemical /        | No Effect |
| Ammonia (10%)              | solvent for 10 minutes. After that leave for | No Effect |
| Sulfuric Acid (10%)        | 30 minutes. Repeat 5 sets.                   | No Effect |
| Hydrogen Chloride (30%)    |  | No Effect |
| Salt Water (5%)            |  | No Effect |
| Acetic Acid                |  | No Effect |
| Sodium Hydroxide (50%)     |  | No Effect |
| Terpene Cleaner            |  | No Effect |
| Fomula409 (Cleaner)        |  | No Effect |
| MIL-H-5606 Oil             |  | No Effect |
| Mil 7808 Oil               |  | No Effect |
| Brake Cleaner              |  | No Effect |
| Fluid type rust preventive |  | No Effect |
| Brake Fluid DOT4           |  | No Effect |
| Engine Oil                 |  | No Effect |
| Cleaning Solvent           |  | No Effect |
| Acetone                    |  | Failed    |
| Isopropyl Alcohol          |  | No Effect |
| Ethanol                    |  | No Effect |
| Gasoline                   |  | No Effect |
| Jet fuel (JP-8)            |  | No Effect |
| Toluene                    |  | Failed    |
| Hexane                     |  | No Effect |
| Heptane                    |  | No Effect |
| Water                      |  | No Effect |
| Mineral Spirit             |  | No Effect |
| Methanol                   |  | No Effect |
| Ethyl Methyl Ketone        |  | Failed    |
| Ethyl Acetate              |  | Failed    |

## Note:

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