



Color Laser Film - Schreiner

IUID PRODUCT LINE

Schreiner Color Laser Film (CLF) label stock is a high-grade polyester composite that is extremely resistant to environmental conditions and has outstanding adhesion properties for rough industrial applications. CLF labels can be marked by a laser in a zero-emission process, during which the laser-active layer below the transparent laminate produces a high-contrast color reference layer for the inscription. Using laser cutting for the marking process, the film surface remains undamaged with no ablation of film particles, creating a tough, highly environment-resistant label.

Schreiner CLF is designed with an acrylic adhesive that has an extremely high tactile force. Due to its modified formula, this adhesive has been proven to perform on many different material substrates. CLF is available either as continuous material for individual laser cutting at the user's premises or as film labels cut to specified sizes.

Material and Design Specifications

- Material: PET 0.004" (0.09 mm) thick
- High-grade polyester material
- Laser-beam marked print method
- Product Form: Continuous material or film labels cut to a specified size, rolls and sheets
- Shelf Life - Maximum storage period of 1 year under normal room conditions

Adhesion (Adhesive Performance/Bond Strength in N/25mm)

- Glass - 23
- Steel - 17
- Aluminum - 19
- Polypropylene - 8

*Above adhesive performance/bond strength values are average values. Final adhesive performance/bond strength is achieved approximately 72 hours after application.

*N/mm means that a force of that many newtons was developed across a sample that many mm wide during a peel test.

Key Features

- Flexible inscription
- Excellent contrast
- Excellent resistance to chemicals, temperature changes, mechanical abrasion, etc.
- Zero-emission laser marking process
- A non-halogen film, free of silicon and resistant to plasticizers
- Dimensionally stable and tear-resistant for heavy-duty use in industrial environments
- Suitable for lamp or diode-pumped Nd:YAG laser systems and fiber lasers

Applications

- IUID

Environmental Specifications

- Operating Temperature Range: -40° F to +248° F (-40 to +120° C) - permanent service temperature
- Minimum Application Temperature: +50° F (+10° C)
- Chemical Resistance: Excellent resistance to premium gasoline/super petrol, cold cleaner and engine oil over a period of 1 hour.
- UV Resistance: Up to 5 years
- Climatic and Weather Resistance: Climatic resistance according to DIN 50 017-KK, 240 hrs at 100% rel. humidity and 104° F (40° C) - no change

Adhesive Properties: Modified acrylic adhesive with excellent weather, solvent and plasticizer resistance. A significantly thicker adhesive coating than with standard versions achieves outstanding adhesion even to rough and structured surfaces.

Test Results

These tests were conducted for a limited period in strict laboratory conditions. To achieve maximum satisfaction, we highly recommend any customer considering use of this product test the labels in the environment in which they will be used.

Resistance to Chemicals and Solvents: Samples applied to glass panels, allowed to wet out for 72+ hours, immersed in chemicals below. Ambient room temperature conditions

| Sample (Immersion Time) | Water | Salt Water | Bathroom Cleaner | Glass Cleaner | Isopropanol 99% | Brake Fluid DOT 3 | Acetone | Diesel Fuel | Nitric Acid | Hydrochloric Acid | Sodium Hydroxide |
|--------------------------|-------|------------|------------------|---------------|-----------------|-------------------|---------|-------------|-------------|-------------------|------------------|
| Schriener CLF (2 hours) | NE | NE | NE | NE | AO/ER | NE | AO/ER | AO/ER | NE | NE | NE |
| Schriener CLF (24 hours) | NE | NE | NE | NE | AO/ER | AO/ER | TD | AO/ER | NE | NE | NE |
| Schriener CLF (48 hours) | NE | NE | NE | AL | AO/ER | AO/ER | TD | AO/ER | NE | NE | NE |

Key: NE = No Effect, AO = Adhesive Ooze, AL = Loss of Adhesion to Glass Panel, TD = Tag Delaminated, PE = Print Erosion Under Laminate, ER = Adhesive Edge Erosion, TW = Tag Wrinkled

Resistance to Extreme Temperatures:

| Temperature | -40° F (-40° C) | 300° F (148.9° C) |
|-----------------|-----------------|-----------------------------|
| Exposure Period | 24 Hours | 1 Hour (Max Temp. Exposure) |
| Change | NE | NE |

Key: NE = No Effect

Abrasion Resistance

| Test | Strokes | Result |
|---|---------|--------|
| Taber/Abraser: CS-10 abrading wheels, 500 gram per wheel load | 3,000 | NE |

Key: NE = No Effect

Climatic and Weather Resistance

| Weather Temperature Resistance (° C) | Exposure period in hours | Change |
|--------------------------------------|--------------------------|--------|
| 38° C | 24 | NE |
| 105° C | 72 | NE |
| 120° C | 1 | NE |
| -30° C | 24 | NE |

Key: NE = No Effect

*All technical information and recommendations are believed to be accurate but do not guarantee or warranty. Suitability is the responsibility of the user.

Installation Instructions

- Clean the surface using Isopropyl alcohol, alcohol pad or equivalent solvent to ensure surface is free from dirt, dust, oil and misc. debris that may affect adhesion.
- Handle the tag by edges, peel release liner from back ensuring not to touch the adhesive.
- Place the tag in desired tagging location and firmly apply even pressure to the tag for 5 seconds.
- Do not disturb the newly mounted tag for at least 72 hours to ensure proper adhesive seating.