### FUJICOLOR NEGATIVE FILM LIST

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TUNGSTEN TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE No.</td>
<td>ETERNA Vivid160</td>
</tr>
<tr>
<td>35mm</td>
<td>8543</td>
</tr>
<tr>
<td>16mm</td>
<td>8643</td>
</tr>
<tr>
<td>TUNGSTEN</td>
<td>160</td>
</tr>
<tr>
<td>DAYLIGHT</td>
<td>100</td>
</tr>
<tr>
<td>SIDEPRINT</td>
<td>FN43</td>
</tr>
</tbody>
</table>

### DAYLIGHT TYPE

<table>
<thead>
<tr>
<th>ITEM</th>
<th>F-64D</th>
<th>ETERNA 250D</th>
<th>REALA 500D</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE No.</td>
<td>F-64D</td>
<td>ETERNA 250D</td>
<td>REALA 500D</td>
</tr>
<tr>
<td>35mm</td>
<td>8522</td>
<td>8563</td>
<td>8592</td>
</tr>
<tr>
<td>16mm</td>
<td>8622</td>
<td>8663</td>
<td>8692</td>
</tr>
<tr>
<td>TUNGSTEN</td>
<td>16</td>
<td>64</td>
<td>125</td>
</tr>
<tr>
<td>DAYLIGHT</td>
<td>64</td>
<td>250</td>
<td>500</td>
</tr>
<tr>
<td>SIDEPRINT</td>
<td>FN22</td>
<td>FN63</td>
<td>FN92</td>
</tr>
</tbody>
</table>

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*Kodak Daylight Filter No.85*
How to read labels

● 35mm

Name of film
Master roll number
Emulsion number
Film width
Type number of film
Perforation pitch
Length of roll in meters (in feet)
Slit number
Exposure index
Recommended color temperature of light source
Emulsion position (Emulsion in)

● 16mm

Name of film
Film width
Length of roll in meters (in feet)
Type number of film
Exposure index
Recommended color temperature of light source

● Original Seal

Perforation pitch
Emulsion position and winding type (Emulsion in and B winding)
Type number of film
Name of film
Emulsion number
Master roll number
Slit number
35mm TUNGSTEN TYPE

ETerna\textsuperscript{vivid} 500 (E.I. 500)
Type 8547

- Original Tape
  ETERNA 500 \text{723 - 001}

- Film Identification Code
  FN47

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ETerna\textsuperscript{vivid} 500 (E.I. 500)
Type 8573

ETerna\textsuperscript{400} (E.I. 400)
Type 8583

---

ETerna\textsuperscript{250D} (E.I. 250)
Type 8563

---

DAILIGHT TYPE

ETerna\textsuperscript{250} (E.I. 250)
Type 8553

- Original Tape
  ETERNA 250 \text{801 - 001}

- Film Identification Code
  FN53

---

ETerna\textsuperscript{250D} (E.I. 250)
Type 8563

- Original Tape
  ETERNA 250D \text{401 - 001}

- Film Identification Code
  FN63
Exposure index
Tungsten light (3200K)... 160
Daylight ......................... 100 (with Kodak Daylight Filter No.85)

Numbers are for use with exposure meters marked for ISO/ASA speeds. Please note, however, that recommended exposure indexes may not apply due to differences in exposure meters, how they are used, and processing conditions. For best results, test exposures should be made based on instructions for the exposure meter to be used.

Reciprocity characteristics
ETERNA Vivid 160 requires no filter corrections or exposure adjustments for shutter speeds of 1/1000 to 1/10 second. For exposures of 1 second, open the lens 1/3 of a stop.

Edge markings
The MR code system [edge number, film identification mark (FN43), and machine-readable bar code for each, film name (FUJI 160), emulsion number, roll number, frame marks (4 perforations apart for 35mm film; no frame marks for 16mm film)] is printed as latent images.

Color balance
ETERNA Vivid 160 is color balanced for tungsten light (3200K), and requires no filters for use in these conditions. When shooting outdoors in daylight or under other light sources, the following conversion filters and exposure adjustments should be made.
These filter recommendations will provide approximate color temperature conversion. Final color correction should be done when printing.

<table>
<thead>
<tr>
<th>Light source</th>
<th>Filter</th>
<th>Filter Exposure index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tungsten light (3200K)</td>
<td>None</td>
<td>160</td>
</tr>
<tr>
<td>Daylight (sunlight + skylight)</td>
<td>Kodak Filter No.85</td>
<td>100</td>
</tr>
<tr>
<td>Metal halide lamps (e.g. HMI)</td>
<td>Kodak Filter No.85</td>
<td>100</td>
</tr>
<tr>
<td>Ordinary fluorescent lamps (White light type)</td>
<td>Kodak Filter CC30R</td>
<td>80</td>
</tr>
<tr>
<td>(Daylight type)</td>
<td>Kodak Filter No.85</td>
<td>100</td>
</tr>
<tr>
<td>Three-band fluorescent lamps</td>
<td>Kodak Filter CC30R</td>
<td>80</td>
</tr>
<tr>
<td>White daylight type (5000K)</td>
<td>Kodak Filter CC30R</td>
<td>80</td>
</tr>
<tr>
<td>Daylight type (6700K)</td>
<td>Kodak Filter CC40R</td>
<td>64</td>
</tr>
</tbody>
</table>

In order to simulate conditions closest to practical use, exposure was made under a 3200K tungsten light source, through a Fuji SC-41 ultraviolet absorbing filter. Processing was carried out under standard conditions and the three color densities were measured, producing the results indicated in the graph above.
**ETERNA 250**

35mm Type 8553 / 16mm Type 8653

Enhanced latitude
Enhanced gradation balance
Improved intercuttability
Exceptional grain
Superb sharpness

**Exposure index**

Tungsten light (3200K)... 250
Daylight ....................... 160 (with Kodak Daylight Filter No.85)

Numbers are for use with exposure meters marked for ISO/ASA speeds. Please note, however, that recommended exposure indexes may not apply due to differences in exposure meters or the way they are used, or variations in processing conditions. For best results, test exposures should be made, following the instructions for the exposure meter to be used.

**Reciprocity characteristics**

ETERNA 250 requires no filter corrections or exposure adjustments for shutter speeds of 1/1000 to 1/10 second. For exposures of 1 second, open the lens 1/3 of a stop.

**Edge markings**

MR code system [edge number, film identification mark (FN53), and their machine-readable bar codes, film name (FUJI 250), emulsion number, roll number, frame marks (5 perforations apart for 65mm film; 4 perforations apart for 35mm film; no frame marks for 16mm film)] is printed as latent images.

**Color balance**

ETERNA 250 is color balanced for tungsten light (3200K), eliminating the need for filters in these conditions. When shooting under other light sources, use the conversion filters and exposure adjustments listed here.
In order to simulate conditions closest to practical use, exposure was made under a 3200K tungsten light source, through a Fuji SC-41 ultraviolet absorbing filter. Processing was carried out under standard conditions and the three color densities were measured, producing the results indicated in the graph above.

<table>
<thead>
<tr>
<th>Light source</th>
<th>Filter</th>
<th>Exposure index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tungsten light (3200K)</td>
<td>None</td>
<td>250</td>
</tr>
<tr>
<td>Daylight (sunlight + skylight)</td>
<td>Kodak Filter No.85</td>
<td>160</td>
</tr>
<tr>
<td>Metal halide lamps (e.g. HMI)</td>
<td>Kodak Filter No.85</td>
<td>160</td>
</tr>
<tr>
<td>Ordinary fluorescent lamps (White light type)</td>
<td>Kodak Filter CC30R</td>
<td>125</td>
</tr>
<tr>
<td>(Daylight type)</td>
<td>Kodak Filter No.85</td>
<td>160</td>
</tr>
<tr>
<td>Three-band fluorescent lamps (White daylight type (5000K))</td>
<td>Kodak Filter CC30R</td>
<td>125</td>
</tr>
<tr>
<td>Daylight type (6700K)</td>
<td>Kodak Filter CC40R</td>
<td>100</td>
</tr>
</tbody>
</table>

These filter recommendations will provide approximate color temperature conversion. Final color correction should be done during printing.
**FUJICOLOR NEGATIVE FILM**

**ETERNA 400**

35mm Type 8583 / 16mm Type 8683

- Enhanced shadow detail
- Natural Color Reproduction (atmospheric color)
- Exceptionally fine grain
- High speed, with smooth gradation
- Excellent sharpness
- Enhanced telecine characteristics

**Exposure index**

Tungsten light (3200K)... 400  
Daylight ....................... 250 (with Kodak Daylight Filter No.85)

Numbers are for use with exposure meters marked for ISO/ASA speeds. Please note, however, that recommended exposure indexes may not apply due to differences in exposure meters, how they are used, and processing conditions. For best results, test exposures should be made based on instructions for the exposure meter to be used.

**Reciprocity characteristics**

ETERNA 400 requires no filter corrections or exposure adjustments for shutter speeds of 1/1000 to 1/10 second. For exposures of 1 second, open the lens 1/3 of a stop.

**Edge markings**

The MR code system [edge number, film identification mark (FN83), and machine-readable bar code for each, film name (FUJI 400), emulsion number, roll number, frame marks (4 perforations apart for 35mm film; no frame marks for 16mm film)] is printed as latent images.

**Color balance**

ETERNA 400 is color balanced for tungsten light (3200K), and requires no filters for use in these conditions. When shooting outdoors in daylight or under other light sources, the following conversion filters and exposure adjustments should be made.
In order to simulate conditions closest to practical use, exposure was made under a 3200K tungsten light source, through a Fuji SC-41 ultraviolet absorbing filter. Processing was carried out under standard conditions and the three color densities were measured, producing the results indicated in the graph above.

### Characteristic curves

- **Exposure**: 3200K light source for 1/50 second with Fuji Filter SC-41
- **Processing**: Specified standard conditions
- **Densitometry**: Three color densities (status M)

<table>
<thead>
<tr>
<th>Light source</th>
<th>Filter</th>
<th>Exposure index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tungsten light (3200K)</td>
<td>None</td>
<td>400</td>
</tr>
<tr>
<td>Daylight (sunlight + skylight)</td>
<td>Kodak Filter No.85</td>
<td>250</td>
</tr>
<tr>
<td>Metal halide lamps (e.g. HMI)</td>
<td>Kodak Filter No.85</td>
<td>250</td>
</tr>
<tr>
<td>Ordinary fluorescent lamps (White light type)</td>
<td>Kodak Filter CC30R</td>
<td>200</td>
</tr>
<tr>
<td>(Daylight type)</td>
<td>Kodak Filter No.85</td>
<td>250</td>
</tr>
<tr>
<td>Three-band fluorescent lamps (White daylight type (5000K))</td>
<td>Kodak Filter CC30R</td>
<td>200</td>
</tr>
<tr>
<td>Daylight type (6700K)</td>
<td>Kodak Filter CC40R</td>
<td>160</td>
</tr>
</tbody>
</table>

These filter recommendations will provide approximate color temperature conversion. Final color correction should be done when printing.


**Exposure index**

Tungsten light (3200K)... 500  
Daylight ......................... 320 (with Fuji Filter LBA-12 or  
Kodak Daylight Filter No.85)

Numbers are for use with exposure meters marked for ISO/ASA  
speeds. Please note, however, that recommended exposure indexes  
may not apply due to differences in exposure meters, how they are  
used, and processing conditions. For best results, test exposures  
should be made based on instructions for the exposure meter to be  
used.

**Reciprocity characteristics**

ETERNA Vivid 500 requires no filter corrections or exposure  
adjustments for shutter speeds of 1/1000 to 1/10 second. For  
exposures of 1 second, open the lens 1/3 of a stop.

**Edge markings**

The MR code system [edge number, film identification mark  
(FN47), and machine-readable bar code for each, film name (FUJI  
V500), emulsion number, roll number, frame marks (4 perforations  
apart for 35mm film; no frame marks for 16mm film)] is printed as  
latent images.

**Color balance**

ETERNA Vivid 500 is color balanced for tungsten light (3200K),  
and requires no filters for use in these conditions. When shooting  
outdoors in daylight or under other light sources, the following  
conversion filters and exposure adjustments should be made.
In order to simulate conditions closest to practical use, exposure was made under a 3200K tungsten light source, through a Fuji SC-41 ultraviolet absorbing filter. Processing was carried out under standard conditions and the three color densities were measured, producing the results indicated in the graph above.

These filter recommendations will provide approximate color temperature conversion. Final color correction should be done when printing.
Exposure index
Tungsten light (3200K)... 500
Daylight ....................... 320 (with Kodak Daylight Filter No.85)

Numbers are for use with exposure meters marked for ISO/ASA speeds. Please note, however, that recommended exposure indexes may not apply due to differences in exposure meters, how they are used, and processing conditions. For best results, test exposures should be made based on instructions for the exposure meter to be used.

Reciprocity characteristics
ETERNA 500 requires no filter corrections or exposure adjustments for shutter speeds of 1/1000 to 1/10 second. For exposures of 1 second, open the lens 1/3 of a stop.

Edge markings
The MR code system [edge number, film identification mark (FN73), and machine-readable bar code for each, film name (FUJI 500), emulsion number, roll number, frame marks (4 perforations apart for 35mm film; no frame marks for 16mm film)] is printed as latent images.

Color balance
ETERNA 500 is color balanced for tungsten light (3200K), and requires no filters for use in these conditions. When shooting outdoors in daylight or under other light sources, the following conversion filters and exposure adjustments should be made.
In order to simulate conditions closest to practical use, exposure was made under a 3200K tungsten light source, through a Fuji SC-41 ultraviolet absorbing filter. Processing was carried out under standard conditions and the three color densities were measured, producing the results indicated in the graph above.

<table>
<thead>
<tr>
<th>Light source</th>
<th>Filter</th>
<th>Exposure index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tungsten light (3200K)</td>
<td>None</td>
<td>500</td>
</tr>
<tr>
<td>Daylight (sunlight + skylight)</td>
<td>Kodak Filter No.85</td>
<td>320</td>
</tr>
<tr>
<td>Metal halide lamps (e.g. HMI)</td>
<td>Kodak Filter No.85</td>
<td>320</td>
</tr>
<tr>
<td>Ordinary fluorescent lamps (White light type)</td>
<td>Kodak Filter CC30R</td>
<td>250</td>
</tr>
<tr>
<td>(Daylight type)</td>
<td>Kodak Filter No.85</td>
<td>320</td>
</tr>
<tr>
<td>Three-band fluorescent lamps White daylight type (5000K)</td>
<td>Kodak Filter CC30R</td>
<td>250</td>
</tr>
<tr>
<td>Daylight type (6700K)</td>
<td>Kodak Filter CC40R</td>
<td>200</td>
</tr>
</tbody>
</table>

These filter recommendations will provide approximate color temperature conversion. Final color correction should be done when printing.
Fujicolor Negative Film F-64D do not need lens opening adjustment nor filtration to avoid a shift of color balance when used with shutter speeds of 1/1000 to 1/10 second. When the exposure time is 1 second, use 1/3 stop larger lens opening.

Exposure index
Daylight ......................... 64

This number is appropriate for use with exposure meters marked for ISO/ASA speeds. It should be noted, however, that the recommended exposure index may not apply exactly due to differences in processing, the usage of exposure meters, or other conditions. For best results it is recommended that test exposures be made prior to use, referring to instructions for the exposure meter used.

Reciprocity characteristics
Fujicolor Negative Film F-64D does not need lens opening adjustment nor filtration to avoid a shift of color balance when used with shutter speeds of 1/1000 to 1/10 second. When the exposure time is 1 second, use 1/3 stop larger lens opening.

Edge markings
MR code system [key number, film identification mark (FN22), and machine-readable bar code for each; film name FUJI F-64D, emulsion number, roll number, frame marks (5, 8, 15 perforations apart for 65mm film, 4 perforations apart for 35mm film, no frame marks for 16mm film), etc.] is printed as latent images.

Color balance
This film is color-balanced for exposure to daylight. No light balancing or conversion filters are required with this light source. Where the light source varies significantly from this color temperature, as in tungsten light filming, the following filters and exposure indexes are recommended.
Characteristic curves

Exposure : 5400K light source for 1/50 second with Fuji Filter SC-41
Processing : Specified standardized conditions
Densitometry : Three color densities (status M)

In order to simulate conditions closest to practical use, exposure was made under a 5400K light source, through a Fuji SC-41 ultraviolet absorbing filter. Processing was carried out under standard conditions and the three color densities (status M) were measured. The results of measurements are plotted as characteristic curves.

<table>
<thead>
<tr>
<th>Light source</th>
<th>Filter</th>
<th>Exposure index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daylight (sunlight + skylight)</td>
<td>None</td>
<td>64</td>
</tr>
<tr>
<td>Tungsten light</td>
<td>Kodak Daylight Filter No.80A</td>
<td>16</td>
</tr>
<tr>
<td>Metal halide lamps (e.g. HMI)</td>
<td>None</td>
<td>64</td>
</tr>
<tr>
<td>Ordinary fluorescent lamps (White light type)</td>
<td>None</td>
<td>64</td>
</tr>
<tr>
<td>White Daylight type</td>
<td>None</td>
<td>64</td>
</tr>
<tr>
<td>Three-band fluorescent lamps White daylight type (5000K)</td>
<td>None</td>
<td>64</td>
</tr>
<tr>
<td>Daylight type (6700K)</td>
<td>None</td>
<td>64</td>
</tr>
</tbody>
</table>

The above filter recommendations should provide approximate color conversion. Final color correction should be made when making prints.
**Exposure index**

Tungsten light (3200K)... 64 (with Kodak Daylight Filter No.80A)
Daylight .......................... 250

Numbers are for use with exposure meters marked for ISO/ASA speeds. Please note, however, that recommended exposure indexes may not apply due to differences in exposure meters or the way they are used, or variations in processing conditions. For best results, test exposures should be made, following the instructions for the exposure meter to be used.

**Reciprocity characteristics**

ETERNA 250D requires no filter corrections or exposure adjustments for shutter speeds of 1/1000 to 1/10 second. For exposures of 1 second, open the lens 1/3 of a stop.

**Edge markings**

MR code system [edge number, film identification mark (FN63), and their machine-readable bar codes, film name (FUJI 250D), emulsion number, roll number, frame marks (5 perforations apart for 65mm film; 4 perforations apart for 35mm film; no frame marks for 16mm film)] is printed as latent images.

**Color balance**

ETERNA 250D is color balanced for daylight, eliminating the need for filters in these conditions. When shooting under other light sources, use the conversion filters and exposure adjustments listed here.
In order to simulate conditions closest to practical use, exposure was made under a 5400K tungsten light source, through a Fuji SC-41 ultraviolet absorbing filter. Processing was carried out under standard conditions and the three color densities were measured, producing the results indicated in the graph above.

These filter recommendations will provide approximate color temperature conversion. Final color correction should be done during printing.

<table>
<thead>
<tr>
<th>Light source</th>
<th>Filter</th>
<th>Exposure index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daylight (sunlight + skylight)</td>
<td>None</td>
<td>250</td>
</tr>
<tr>
<td>Tungsten light</td>
<td>Kodak Daylight Filter No.80A</td>
<td>64</td>
</tr>
<tr>
<td>Metal halide lamps (e.g. HMI)</td>
<td>None</td>
<td>250</td>
</tr>
<tr>
<td>Ordinary fluorescent lamps (White light type)</td>
<td>None</td>
<td>250</td>
</tr>
<tr>
<td>(Daylight type)</td>
<td>None</td>
<td>250</td>
</tr>
<tr>
<td>Three-band fluorescent lamps</td>
<td>None</td>
<td>250</td>
</tr>
<tr>
<td>White daylight type (5000K)</td>
<td>None</td>
<td>250</td>
</tr>
</tbody>
</table>
FUJICOLOR NEGATIVE FILM

REALA 500D

35mm Type 8592 / 16mm Type 8692

The world's first high-speed (E.I. 500) daylight-type motion picture film

4th Color Layer for natural, faithful color reproduction

Smooth, lifelike skin-tones

Outstanding performance in mixed lighting

Excellent telecine transfer characteristics for high-quality video

• Exposure index

Tungsten light (3200K)... 125 (with Kodak Daylight Filter No.80A)
Daylight ......................... 500

These numbers are appropriate for use with exposure meters marked for ISO/ASA speeds. It should be noted, however, that the recommended exposure index may not apply exactly due to differences in processing, the usage of exposure meters, or other conditions. For best results it is recommended that test exposures be made prior to use, referring to instructions for the exposure meter used.

• Reciprocity characteristics

No filter corrections nor exposure adjustments needed for shutter speeds of 1/1000 to 1/10 second. When exposure is 1 second, use 1/3 stop larger lens opening.

• Edge markings

MR code system [key number, film identification mark (FN92), and machine-readable bar code for each; film name FUJI 500D, emulsion number, roll number, frame marks (4 perforations apart for 35mm film, no frame marks for 16mm film), etc.] is printed as latent images.

• Color balance

This film is color-balanced for exposure to daylight. For other light sources, use the conversion filters in the table below.
In order to simulate conditions closest to practical use, exposure was made under a 5400K light source, through a Fuji SC-41 ultraviolet absorbing filter. Processing was carried out under standard conditions and the three color densities (status M) were measured. The results of measurements are plotted as characteristic curves.

These filter recommendations should provide approximate color conversion. Final color correction should be made at the time of printing.
FUJICOLOR INTERMEDIATE FILM

ETERNA -CI

35mm Type 8503/4503 / 16mm Type 8603

Cinematic impact!
Natural color and tonal reproduction.

• Aim Density in Printing
This film is designed to allow the same printing aim density for both master positives and duplicate negatives. Adjust the density settings on the printer so that the following density values (status M densitometry) may be obtained when a color negative of an 18% reflectance gray patch is appropriately exposed and processed under standard conditions.

<table>
<thead>
<tr>
<th>Density</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Density</td>
<td>Dmin + 1.0 ± 0.1</td>
</tr>
<tr>
<td>Green Density</td>
<td>Dmin + 1.0 ± 0.1</td>
</tr>
<tr>
<td>Blue Density</td>
<td>Dmin + 1.0 ± 0.1</td>
</tr>
</tbody>
</table>

• Edge Markings
The MR. CODE system [key number, film identification code (FI 03), machine-readable bar code, film name (FUJI FCI), emulsion number, roll number, frame marks (4 perforations apart for 35mm stock, no frame mark for 16mm stock) etc.] is printed as latent images.

• Film Base Safelight
Clear safety base (TAC) or polyester base (PET) is used. This film should be handled in total darkness or under safelight conditions. In the latter case a Fuji Safelight Filter No.4 or a Kodak Safelight Filter No.3 (both are dark green) should be used in combination with a 10-watt light, keeping the film at a distance of 1m or more from it. This film can also be handled under the same safelight conditions that are essential to color positive film in which case a Fuji Safelight Filter No.101A or Kodak Safelight Filter No.8 (both are dark orange) should be used. If the film is to be exposed to these safelight conditions for extended periods, sufficient safety factor testing should be carried out before using the film.

• Printing
In master position production, contact printers are usually employed. In the interest of image stability, however, it is desirable that a step contact printer be used. For duplicate negative production an optical printer can be used. In this case it is desirable to use an optical printer in conjunction with a wet gate projector to inhibit graininess
deterioration due to the matting agent on the emulsion surface. Insert an ultraviolet absorbing filter (Fuji Filter SC-42 or Kodak Wratten Filter No.2E) and a heat-absorbing filter (Fuji Filter No.2043) in the light beam of the printer.

### Packaging Units and Perforations

<table>
<thead>
<tr>
<th>Film Width</th>
<th>Film Length and Winding Type</th>
<th>Core / Spool</th>
<th>Shape, Pitch and Specification of Perforations</th>
</tr>
</thead>
<tbody>
<tr>
<td>35mm</td>
<td>305m (Cellulose triacetate base)</td>
<td>35 x 50 mm core</td>
<td>N-4.740 mm (Negative perforations with short pitch) [ISO 491 : 1988]</td>
</tr>
<tr>
<td></td>
<td>305m (Polyester base)</td>
<td>35 x 50 mm core</td>
<td></td>
</tr>
<tr>
<td></td>
<td>610m (Cellulose triacetate base)</td>
<td>35 x 75 mm core</td>
<td></td>
</tr>
<tr>
<td></td>
<td>610m (Polyester base)</td>
<td>35 x 75 mm core</td>
<td></td>
</tr>
<tr>
<td>16mm (Cellulose triacetate base)</td>
<td>*305m x 2 (Single-perforated, type A winding)</td>
<td>16 x 50 mm core</td>
<td>1R-7.605 mm (Single perforations with short pitch) [ISO 69 : 1972]</td>
</tr>
<tr>
<td></td>
<td>*305m x 2 (Single-perforated, type B winding)</td>
<td>16 x 50 mm core</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*305m x 2 (Double-perforated)</td>
<td>16 x 50 mm core</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*610m x 2 (Single-perforated, type A winding)</td>
<td>16 x 75 mm core</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*610m x 2 (Single-perforated, type B winding)</td>
<td>16 x 75 mm core</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*610m x 2 (Double-perforated)</td>
<td>16 x 75 mm core</td>
<td></td>
</tr>
</tbody>
</table>

Items marked with * are supplied on a special order basis.

### Characteristic curves

- **Exposure**: 2854K light source for 1/50 second with Fuji Filter SC-42 and correction filter
- **Processing**: Specified standardized conditions
- **Densitometry**: Three color densities (status M)

In order to simulate conditions closest to practical use, exposure was made under a 2854K light source, through a Fuji SC-42 ultraviolet absorbing filter as well as a correction filter which corresponds to the color negative film mask. Processing was carried out under standard conditions and the three color densities (status M) were measured. The results of measurements are plotted as characteristic curves here.
• **Film Base Safelight**
  Clear safety base (TAC) or polyester base (PET) is used. This film should be handled in total darkness.

• **Digital Recording**
  The recommended code values for a digital LAD patch are:

<table>
<thead>
<tr>
<th>Code</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>445</td>
</tr>
<tr>
<td>Green</td>
<td>445</td>
</tr>
<tr>
<td>Blue</td>
<td>445</td>
</tr>
</tbody>
</table>

  For Digital Recording, currently offered calibration aims are available. “Carlos aim, CINEON calibration aim and so on”

• **Edge Markings**
  The MR. CODE system [key number, film identification code (FD 11), machine-readable bar code, film name (FUJI RDI), emulsion number, roll number, frame marks (4 perforations apart) etc.] is printed as latent images.

Exceptional sharpness and significant reduction of color cross talk.
**Packaging Units and Perforations**

<table>
<thead>
<tr>
<th>Film Width</th>
<th>Film Length and Winding Type</th>
<th>Core / Spool</th>
<th>Shape, Pitch and Specification of Perforations</th>
</tr>
</thead>
<tbody>
<tr>
<td>35mm</td>
<td>305m (Cellulose triacetate base)</td>
<td>35 × 50 mm core</td>
<td>N-4.740 mm (Negative perforations with short pitch) [ISO 491 : 1988]</td>
</tr>
<tr>
<td></td>
<td>305m (Polyester base)</td>
<td>35 × 50 mm core</td>
<td></td>
</tr>
<tr>
<td></td>
<td>610m (Cellulose triacetate base)</td>
<td>35 × 75 mm core</td>
<td></td>
</tr>
<tr>
<td></td>
<td>610m (Polyester base)</td>
<td>35 × 75 mm core</td>
<td></td>
</tr>
</tbody>
</table>

**Characteristic curves**

Exposure : Digital exposed by ARRILASER  
Maximum exposure values: Red 1750 Green 800 Blue 40  
Processing : Specified standardized conditions  
Densitometry : Three color densities (status M)
• **Film Base**

The polyester (PET) safety base does not allow splicing with film cement. Use splicing tape or an ultrasonic splicing device for splicing.

• **Safelight**

This film should be handled at a distance of 1m (3½ft) or more from a 10-watt electric bulb by the use of a Fuji Safelight Filter No.101A (dark orange) for color positive film. When the film is exposed to safelight for prolonged periods of time, a sufficient test should be performed to ensure safety.

• **Printing**

○ **Image**

When prints are to be made from Fujicolor motion picture negative film (processed UL bleach) using a printer with an additive color light source, such as Bell & Howell Model C, the printer conditions are approximately as follows.

- Printer light source: 1000W, DC70V
- Filters: Fuji Filter SC41+Heat-absorbing Filter No.2043
- Printer speed: 55m/min (180ft/min)

Printer settings:

<table>
<thead>
<tr>
<th>Light</th>
<th>Trimmer</th>
<th>Tape</th>
<th>ND Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>15</td>
<td>25</td>
<td>0.50</td>
</tr>
<tr>
<td>Green</td>
<td>15</td>
<td>25</td>
<td>0.55</td>
</tr>
<tr>
<td>Blue</td>
<td>15</td>
<td>25</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Aim Print Density: Normally expose a negative film normally to 18% reflectance gray card and process the negative film under standard conditions. Print the negative image of the gray card onto the Fujicolor positive film. Fine adjustments should then be made to the printer settings so that the following density values of status A may be obtained with the gray card on the positive film. (The aim density values are based on the assumption that the film will be projected with a xenon lamp projector.)

```
R 1.10    G 1.05    B 1.05
```
○ Analog Sound Track
Insert Fuji Filter SC-50 in the light path of the printer to record a sound image in the top two emulsion layers. The optimum density of the variable-area type sound track of the color positive film is determined by the combination of its density and the sound track density of the sound negative film. Obtain the optimum density of the variable-area type sound track by performing a cross modulation test. The sound track density of color positive film usually ranges from 1.1 to 1.6 when measured at a wavelength of 800nm.

○ Digital Sound Track
Refer to the specifications of each digital recording system.

● Processing
Fujicolor Positive Film F-CP is designed to be processed in Process ECP-2B for Eastman Color Print Film. The process steps of prebath and rem-jet removal & rinse may be omitted.

● Edge Markings
Film identification marks (FUJICOLOR, Type No, Lot No, Roll No, Slit No and Perforating Machine No) are printed as latent images. For edge markings, a magenta coloring is used in order not to interfere with the SDDS soundtracks.

● Raw Stock Storage
Like other color films, Fujicolor Positive Film F-CP may undergo certain changes in photographic properties when stored for extended periods. Since these changes can be accelerated, particularly through the action of heat and moisture, it is recommended that raw stock be stored at temperatures below 13°C (55.4°F) in the package. A package containing film that has been refrigerated should remain sealed until it reaches equilibrium with the ambient temperature. If packages are opened too soon, moisture from outside the package may condense on the film surface before and during use.

● Exposed Film Handling
Exposed films should be processed as soon as possible. If exposed films cannot be processed within 3 days of exposure, they should be stored below 10°C (50°F) and processed as soon as circumstances permit.

● Processed Film Storage
Fujicolor Positive Film F-CP is designed to resist color fading. However, to avoid changes in dye image due to high temperatures and humidities during prolonged storage, it is recommended that processed films be kept at a temperature of 15°C (59°F) with 30% to 40% RH for long-term storage (about 100 years), and at a temperature of 20°C (68°F) with 40% to 50% RH for medium-term storage (about 50 years). Furthermore, it is also recommended that processed films in storage should be checked by visual inspection for changes (e.g., deformation, color fading, adhesion, mold) at intervals of a few years.

Characteristic curves

<table>
<thead>
<tr>
<th>Exposure</th>
<th>: 2854K tungsten light source for 1/100 second with Fuji Filter SC-41 and Color Correction Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing</td>
<td>: Specified standardized conditions</td>
</tr>
<tr>
<td>Densitometry</td>
<td>: Three color diffusion densities (status A)</td>
</tr>
</tbody>
</table>

![Characteristic curve diagram](image)
• **Film Base**
The polyester (PET) safety base does not allow splicing with film cement. Use splicing tape or an ultrasonic splicing device for splicing.

• **Safelight**
This film should be handled at a distance of 1m (3½ ft) or more from a 10-watt electric bulb by the use of a Fuji Safelight Filter No.101A (dark orange) for color positive film. When the film is exposed to safelight for prolonged periods of time, a sufficient test should be performed to ensure safety.

• **Printing**
  ○ **Image**
  When prints are to be made from Fujicolor motion picture negative film (processed UL bleach) using a printer with an additive color light source, such as Bell & Howell Model C, the printer conditions are approximately as follows:

  - Printer light source: 1000W, DC70V
  - Filters: Fuji Filter SC41+Heat-absorbing Filter No.2043
  - Printer speed: 55m/min (180ft/min)

  Printer settings:

<table>
<thead>
<tr>
<th>Light</th>
<th>Trimmer</th>
<th>Tape</th>
<th>ND Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>13</td>
<td>25</td>
<td>0.50</td>
</tr>
<tr>
<td>Green</td>
<td>13</td>
<td>25</td>
<td>0.55</td>
</tr>
<tr>
<td>Blue</td>
<td>13</td>
<td>25</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Aim Print Density: Normally expose a negative film normally to 18% reflectance gray card and process the negative film under standard conditions. Print the negative image of the gray card onto the Fujicolor positive film. Fine adjustments should then be made to the printer settings so that the following density values of status A may be obtained with the gray card on the positive film. (The aim density values are based on the assumption that the film will be projected with a xenon lamp projector.)

R 1.10  G 1.05  B 1.05
● Analog Sound Track
Insert Fuji Filter SC-50 in the light path of the printer to record a sound image in the top two emulsion layers. The optimum density of the variable-area type sound track of the color positive film is determined by the combination of its density and the sound track density of the sound negative film. Obtain the optimum density of the variable-area type sound track by performing a cross modulation test. The sound track density of color positive film usually ranges from 1.1 to 1.6 when measured at a wavelength of 800nm.

● Digital Sound Track
Refer to the specifications of each digital recording system.

● Processing
Fujicolor Positive Film ETERNA-CP is designed to be processed in Process ECP-2B for Eastman Color Print Film. The process steps of prebath and rem-jet removal & rinse may be omitted.

● Edge Markings
Film identification marks (FUJICOLOR, Type No, Lot No, Roll No, Slit No and Perforating Machine No) are printed as latent images. For edge markings, a magenta coloring is used in order not to interfere with the SDDS soundtracks.

● Raw Stock Storage
Like other color films, Fujicolor Positive Film ETERNA-CP may undergo certain changes in photographic properties when stored for extended periods. Since these changes can be accelerated, particularly through the action of heat and moisture, it is recommended that raw stock be stored at temperatures below 13°C (55.4°F) in the package. A package containing film that has been refrigerated should remain sealed until it reaches equilibrium with the ambient temperature. If packages are opened too soon, moisture from outside the package may condense on the film surface before and during use.

● Exposed Film Handling
Exposed films should be processed as soon as possible. If exposed films cannot be processed within 3 days of exposure, they should be stored below 10°C (50°F) and processed as soon as circumstances permit.

● Processed Film Storage
Fujicolor Positive Film ETERNA-CP is designed to resist color fading. However, to avoid changes in dye image due to high temperatures and humidities during prolonged storage, it is recommended that processed films be kept at a temperature of 15°C (59°F) with 30% to 40% RH for long-term storage (about 100 years), and at a temperature of 20°C (68°F) with 40% to 50% RH for medium-term storage (about 50 years). Furthermore, it is also recommended that processed films in storage should be checked by visual inspection for changes (e.g., deformation, color fading, adhesion, mold) at intervals of a few years.

Characteristic curves

<table>
<thead>
<tr>
<th>Exposure</th>
<th>2854K tungsten light source for 1/100 second with Fuji Filter SC-41 and Color Correction Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing</td>
<td>Specified standardized conditions</td>
</tr>
<tr>
<td>Densitometry</td>
<td>Three color diffusion densities (status A)</td>
</tr>
</tbody>
</table>

![Characteristic curves diagram](image)

In order to simulate conditions closest to practical use, exposure was made under a 2854K Tungsten light source, through CC-90Y and CC-60M print color correction filters and a Fuji SC-41 ultraviolet absorbing filter in combination. Processing was carried out under standard conditions and the three color densities (status A) were measured. The results of measurements are plotted as characteristic curves. Curves G and B are shifted 1.0 Log H to avoid overlapping.
- **Film Base**
  The polyester (PET) safety base does not allow splicing with film cement. Use splicing tape or an ultrasonic splicing device for splicing.

- **Safelight**
  This film should be handled at a distance of 1m (3\(\frac{1}{2}\) ft) or more from a 10-watt electric bulb by the use of a Fuji Safelight Filter N0.101A (dark orange) for color positive film. When the film is exposed to safelight for prolonged periods of time, a sufficient test should be performed to ensure safety.

- **Printing**
  - **Image**
    When prints are to be made from Fujicolor motion picture negative film (processed UL bleach) using a printer with an additive color light source, such as Bell & Howell Model C, the printer conditions are approximately as follows.
    
    Printer light source: 1000W, DC70V  
    Filters: Fuji Filter SC41+Heat-absorbing Filter No.2043  
    Printer speed: 55m/min (180 ft/min)

    Printer settings:

    | Light | Trimmer | Tape | ND Filter |
    |-------|---------|------|-----------|
    | Red   | 13      | 25   | 0.50      |
    | Green | 13      | 25   | 0.55      |
    | Blue  | 13      | 25   | 0.90      |

    Aim Print Density: Normally expose a negative film normally to 18% reflectance gray card and process the negative film under standard conditions. Print the negative image of the gray card onto the Fujicolor positive film. Fine adjustments should then be made to the printer settings so that the following density values of status A may be obtained with the gray card on the positive film. (The aim density values are based on the assumption that the film will be projected with a xenon lamp projector.)

    R 1.10  G 1.05  B 1.05
Analog Sound Track
Insert Fuji Filter SC-50 in the light path of the printer to record a sound image in the top two emulsion layers. The optimum density of the variable-area type sound track of the color positive film is determined by the combination of its density and the sound track density of the sound negative film. Obtain the optimum density of the variable-area type sound track by performing a cross modulation test. The sound track density of color positive film usually ranges from 1.1 to 1.6 when measured at a wavelength of 800nm.

Digital Sound Track
Refer to the specifications of each digital recording system.

Processing
Fujicolor Positive Film ETERNA 3521XD is designed to be processed in Process ECP-2B for Eastman Color Print Film. The process steps of prebath and rem-jet removal & rinse may be omitted.

Edge Markings
Film identification marks (FUJICOLOR, Type No, Lot No, Roll No, Slit No and Perforating Machine No) are printed as latent images. For edge markings, a magenta coloring is used in order not to interfere with the SDDS soundtracks.

Raw Stock Storage
Like other color films, Fujicolor Positive Film ETERNA 3521XD may undergo certain changes in photographic properties when stored for extended periods. Since these changes can be accelerated, particularly through the action of heat and moisture, it is recommended that raw stock be stored at temperatures below 13°C (55.4°F) in the package. A package containing film that has been refrigerated should remain sealed until it reaches equilibrium with the ambient temperature. If packages are opened too soon, moisture from outside the package may condense on the film surface before and during use.

Exposed Film Handling
Exposed films should be processed as soon as possible. If exposed films cannot be processed within 3 days of exposure, they should be stored below 10°C (50°F) and processed as soon as circumstances permit.

Processed Film Storage
Fujicolor Positive Film ETERNA 3521XD is designed to resist color fading. However, to avoid changes in dye image due to high temperatures and humidities during prolonged storage, it is recommended that processed films be kept at a temperature of 15°C (59°F) with 30% to 40% RH for long-term storage (about 100 years), and at a temperature of 20°C (68°F) with 40% to 50% RH for medium-term storage (about 50 years). Furthermore, it is also recommended that processed films in storage should be checked by visual inspection for changes (e.g., deformation, color fading, adhesion, mold) at intervals of a few years.

Characteristic curves

<table>
<thead>
<tr>
<th>Exposure</th>
<th>2854K tungsten light source for 1/100 second with Fuji Filter SC-41 and Color Correction Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing</td>
<td>Specified standardized conditions</td>
</tr>
<tr>
<td>Densitometry</td>
<td>Three color diffusion densities (status A)</td>
</tr>
</tbody>
</table>

In order to simulate conditions closest to practical use, exposure was made under a 2854K Tungsten light source, through CC-90Y and CC-60M print color correction filters and a Fuji SC-41 ultraviolet absorbing filter in combination. Processing was carried out under standard conditions and the three color densities (status A) were measured. The results of measurements are plotted as characteristic curves. Curves G and B are shifted 1.0 Log H to avoid overlapping.
Edge Markings of 35mm Film

35mm Film

(Example: Fujicolor Negative Film ETERNA-500 Type 8573)

Emulsion Up

Fujicolor negative Film
ETERNA-500
Type 8573

A

B C D E F

G H I J K L

Film Travel →

M N
Edge Markings of 35mm Film

A Mid-Foot Key Number and MR. CODE
The number and barcode with 32-perforation offset are placed at the center between every normal key number and MR. CODE.
Helps identify short scenes. The numbers are smaller than normal key numbers.

B Manufacturer’s Name
C Film Name
D Emulsion number
E Master Roll Number
F Manufacturer’s Code

G MR. CODE
Machine-readable barcode containing manufacturer ID code, film code, film type, key number and offset in perforations.

<table>
<thead>
<tr>
<th>Stop Character</th>
<th>Check Sum</th>
<th>Offset in Perfs.</th>
<th>Same as Human-Readable Key Number</th>
<th>Film Type</th>
<th>Film Code</th>
<th>Mfg. ID. Code</th>
<th>Start Character</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>00</td>
<td>88</td>
<td>77</td>
<td>66</td>
<td>55</td>
<td>73</td>
<td>73</td>
</tr>
</tbody>
</table>

H Zero-Frame Reference Mark
The frame above this mark (·) is identified as the zero-frame specified by both key number and MR. CODE.

I Manufacturer Identification Code
Letter F identifies films manufactured by FUJIFILM Corporation.

J Film Identification Code
Letter N identifies Fujicolor and Black & White Negative Films.
Letter I identifies Fujicolor Intermediate Film.

K Film Type Identification Number
This 2-digit number corresponds to the last two digits of film type number.

L Key Number
Human-readable, 8-digit number.
Increments every one foot (64 perforations).

M Matching Check Symbols
Randomly selected and inserted symbols (in pairs) help verify that the negative and the working print are properly matched.

N Frame Index Mark
This mark (·) at intervals of 4 perforations is helpful in finding the position of the frame line in dark scenes. This is printed without being overlapped on any other edgeprint marking.
Edge Markings of 16mm Film

16mm Film

(Example: Fujicolor Negative Film ETERNA-500 Type 8673)

Emulsion Up

Tails

Fujicolor negative Film
ETERNA-500
Type 8673

Heads

Film Travel →

A B C D E

FUJI 500 100 131 M26/114

F G H I J K

FN 73 5566 7788
Edge Markings of 16mm Film

<Product Information>
A Manufacturer's Name
B Film Name
C Emulsion number
D Master Roll Number
E Manufacturer's Code

MR. CODE
Machine-readable barcode containing manufacturer ID code, film code, film type, key number and offset in perforations.

G Zero-Frame Reference Mark
The frame above this mark (•) is identified as the zero-frame specified by both key number and MR. CODE.

H Manufacturer Identification Code
Letter F identifies films manufactured by FUJIFILM Corporation.

I Film Identification Code
Letter N identifies Fujicolor and Black & White Negative Films.
Letter I identifies Fujicolor Intermediate Film.

J Film Type Identification Number
This 2-digit number corresponds to the last two digits of film type number.

K Key Number
Human-readable, 8-digit number.
Increments every 1/2 foot (20 perforations).
FILM STORAGE

1. RAW STOCK STORAGE

Photographic properties of films change gradually as they age. Changes occur in speed and contrast. Also, fog is often increased.

1-1 Effects of Humidity and Temperature

In Case of Raw Film

Since motion picture raw stock is contained in tapesealed cans to shut out moisture, no special precautions are necessary with regard to humidity until the sealing tape is removed. Once the stock is unsealed, it is recommended to use it up soon. Excessively high humidity should be avoided, because the packaging cardboard and label may become moisture laden or the can may corrode.

Color camera films generally maintain their initial quality for about one year when stored at 10°C (50°F) or below, and black-and-white films at 13°C (55.4°F) or below. When stored at nominal room temperatures (20-25°C / 68-77°F), they undergo gradual changes in photographic properties. If stored at higher temperatures, the changes will occur more rapidly. In such case, film should be kept in containers made of heat insulating materials.

When camera is used under strong sunlight, the temperature inside the magazine may become 20°C (36°F) higher than the outside ambient temperature. In certain cases, the temperature may rise to a sizzling 50°C (122°F). If a white cloth magazine cover is used, it will lower the magazine temperature by approximately 10°C (18°F).

In Case of Print Film

On the other hand, print films are less subject to high temperatures than camera films as temperature and humidity are relatively well controlled. Further, changes in speed can be corrected during printing. For best results, however, it is necessary that black-and-white positive films, duplicating films and color positive films be stored at temperatures of 13°C (55.4°F) or below and color intermediate films at 10°C (50°F) or below.

Film Adhesion

Under high temperature and humidity conditions, moisture absorbing emulsion surfaces are liable to adhere to the film back. Such adhesion easily results in fog and static marks and the emulsion surface may be deformed.

In addition, adhering films may not smoothly be transported through a camera or printer. If films are coated with backing layers, some of the backing may be stripped off and adhere to the emulsion surface, producing spots, mottling and other defects in processed films. Raw stock maintained under cold storage should be left at room temperature for the prescribed
period to avoid moisture condensation which would result in spots and mottling. Raw stock removed from cold storage should remain sealed in the metal can until it comes into equilibrium with atmospheric temperatures. Figures 31 and 32 provide a quick guide to calculate the time that raw stock should remain in their sealed cans after removal from refrigeration at 5°C (41°F) and at −20°C (−4°F).

1-2 Effects of Harmful Gases, Chemicals and Radiation

When handling film stocks, sufficient care should be paid to protect them from harmful gases and chemicals. Gases, such as formaldehyde, hydrogen sulfide, sulfuric acid, ammonia, turpentine oil, and mercury vapors are detrimental to motion picture films. Certain kinds of silicone oil and silicone grease are particularly harmful.

In addition, all raw stocks, especially high-speed materials, need to be protected from X-rays and other radiations, for all radiations cause heavy fog. When passing through inspection gates at airports, radiation exposure should be avoided.

To prevent X-ray dosage, raw stocks should be kept in X-ray-proof cases, such as Fuji Film Carrying Cases.

Fig. 33 indicates the relationship between the standard packaged Fujicolor Negative Film ETERNA 500 and X-ray dosage. Cosmic rays and natural radiation may also cause a gradual increase in film fog.

2. EXPOSED FILM STORAGE

Exposed films require far greater care than raw stocks. Exposed films should be processed as quickly as possible. This is because latent images produced by exposure changes grow or fade with time, and such changes accelerate under high temperature and humidity conditions. Changes in latent images do not always take place uniformly in the highlight to shadow areas, and gradation may also vary depending on the case. With color films, the rate of latent image change differs from one emulsion layer to the other causing the mismatch of color balance.

When exposed but unprocessed films are to be stored for extended periods, they must be kept in cold storage. The specific storage conditions are indicated in the respective data sheets. Even for short periods, they should be kept below 25°C (77°F).

In the case of release print films, on the other hand, it is desirable to process them within 3 days of printing. If they cannot be processed within the specified period, it is necessary to store them at temperature of 10°C (50°F) or below.
Fig. 29 Temperature Inside Cars Parked Under Strong Sunlight

- Car Color: Silver Gray
- Window: Fully Closed
- Weather: Fine (Summer Season in Japan)

Fig. 30 Temperature Inside Camera Magazines Used Under Strong Sunlight

- Weather: Fine (Summer Season in Japan)

Fig. 33 Relationship Between X-ray Dosage and Fujicolor Negative Film ETERNA 500 Fogging

Table 5 Airport Inspection X-ray Exposure Safety Limits for Color Negative Films

<table>
<thead>
<tr>
<th>Type of Film</th>
<th>Exposure Index</th>
<th>Acceptable Number of X-ray Inspections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fujicolor Negative Film ETERNA 500</td>
<td>500</td>
<td>4</td>
</tr>
<tr>
<td>Fujicolor Negative Film ETERNA 250</td>
<td>250</td>
<td>8</td>
</tr>
<tr>
<td>Fujicolor Negative Film ETERNA Vivid 160</td>
<td>160</td>
<td>12</td>
</tr>
</tbody>
</table>

(The X-ray exposure safety limits above are based on the assumption that the dosage per inspection is 0.3 mR for films in standard packages.)
**Fig. 31  Standing Time Required after Removal from Refrigeration**

Refrigerator at
5°C (41°F) → Room at 24°C (75.2°F)
Temperature Difference : 19°C (34.2°F)

**How to Read Figs. 31 and 32**

The required standing times shown were derived under the following conditions.

<table>
<thead>
<tr>
<th>Film Size</th>
<th>16mm and 35mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Film Length</td>
<td>30.5 m (100 ft), 122 m (400 ft), 305 m (1,000 ft), 610 m (2,000 ft)</td>
</tr>
<tr>
<td>Temperature</td>
<td>19°C (34.2°F)</td>
</tr>
<tr>
<td>Difference</td>
<td>When raw stock is transferred from a refrigerator at 5°C (41°F) to a room temperature at 24°C (75.2°F)</td>
</tr>
<tr>
<td>Temperature</td>
<td>44°C (79.2°F)</td>
</tr>
<tr>
<td>Difference</td>
<td>When raw stock is transferred from a freezer at −20°C (−4°F) to a room temperature at 24°C (75.2°F)</td>
</tr>
<tr>
<td>Room Humidity</td>
<td>30 to 90% RH</td>
</tr>
<tr>
<td>Standing Condition</td>
<td>Separated from each other</td>
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</table>

If a 122-m (400-ft) roll 35mm film is taken out of a refrigerator at 5°C (41°F) into a room at 24°C (75°F) with 63% RH, determination of the length of time during which should be kept sealed before it comes into equilibrium with the room temperature is as follows. Locate the 63% RH point on the vertical axis of the graph shown in Fig. 31, extend a horizontal line from this point to the right straight across the graph, and read off the time at its intersection (indicated by an open circle) with the third curved line. It can be seen that for the case cited the film would be brought into equilibrium with room conditions if allowed to stand for 1 hour or longer before unsealing.
<Fujifilm Abroad>

<table>
<thead>
<tr>
<th>Country</th>
<th>Company Name and Address</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NORTH AMERICA</strong></td>
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<tr>
<td>U.S.A.</td>
<td>FUIJIFILM North America Corporation (Motion Picture Group)</td>
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<td>2220 West Magnolia Blvd. Burbank, CA 91506, U.S.A.</td>
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<tr>
<td>Canada</td>
<td>FUIJIFILM North America Corporation (Motion Picture Group)</td>
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<tr>
<td></td>
<td>600 Suffolk Court, Mississauga, Ontario, L5R 4G4, Canada</td>
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<td>FUIJIFILM do Brasil Ltda.</td>
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<td>FUIJIFILM Europe GmbH</td>
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<td>India</td>
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<td>Australia</td>
<td>FUIJIFILM Australia Pty Ltd.</td>
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<td></td>
<td>114 Old Pittwater Road Brookvale, N.S.W. 2100, Australia</td>
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<td>New Zealand</td>
<td>FUIJIFILM NZ Ltd.</td>
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<td></td>
<td>Cnr William Pickering Drive and Bush Road, Albany, Auckland, New Zealand</td>
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<td><a href="http://www.fujifilm.co.nz/">http://www.fujifilm.co.nz/</a></td>
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<td><strong>MIDDLE EAST</strong></td>
<td></td>
</tr>
<tr>
<td>U.A.E.</td>
<td>FUIJIFILM Corporation Dubai Office</td>
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<td></td>
<td>HB3 RA8 P.O. Box 17212, Jebel Ali Free Zone, Dubai, United Arab Emirates</td>
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</tbody>
</table>