

Product Information Bulletin

Fujicolor Crystal Archive

Premium HDX Paper X-Tra Coat



1. Features and uses

FUJICOLOR CRYSTAL ARCHIVE PREMIUM HDX X-Tra Coat has a standard base which enables the creation of photo book blocks with a special lay flat binding technology, while insuring optimal handling of the pages when viewing the photo album.

FUJICOLOR CRYSTAL ARCHIVE PREMIUM HDX X-Tra Coat paper incorporates the High Definition silver halide emulsion technology which delivers enhanced color reproduction, white purity and excellent image stability. Furthermore the special X-Tra Coat layer resulting in high resistance against sticky surface at high humidity (extreme environmental conditions) and fingerprints.

FUJICOLOR CRYSTAL ARCHIVE PREMIUM HDX X-Tra Coat allows the reproduction of a much higher color gamut than electrostatic prints. Digital cameras use the RGB gamut and HDX paper is also printed in RGB gamut. As a result, no image quality loss occurs and an automated produced photo album can be viewed with a brilliance as never before.

Features

• Surface	Glossy and Matte
• Special protection layer	Improves fingerprint resistance and reduces instances of pages sticking together
• Optimal designed thickness properties	Resulting in smooth paper handling
• More vivid color reproduction / wider color range	Retains beautiful colors such as subtle shades of green, vivid blues and reds
• More brilliant white and deeper blacks	Clearer, more distinct highlight details and deep black

- Excellent image stability

Exhibits excellent image stability during long term dark and light storage conditions, as well as storability with respect to nitrogen oxide, ozone and other gases other gases

2. Safelight

Handle in total darkness. If safelight use is unavoidable, observe the following precautions.

- Expose paper no longer than 1 minute to light emitted through two Fuji Safelight Filter No. 103A (or Wratten Safelight Filter No. 13) in a 10 watt tungsten lamp safelight located at least 1 meter from the work area.
- Safelight filters fade with extended use and need regular checking. Replace when paper fogging is detected.
- Exposed paper is susceptible to safelight induced sensitivity increases in the exposed area. For this reason, exposed paper should be subjected as little as possible to safelight illumination.

3. Pre-processing paper handling / storage

The higher the temperature and humidity, the more paper, whether unused, unexposed or exposed, is susceptible to adverse changes in speed, color balance, physical characteristics and other properties. Unprocessed paper is best stored at low temperatures. Specifically, the following conditions should be used for paper storage.

- Short term storage: Store in a cool and dark location, away from direct sunlight, high temperature and high humidity
- Long term storage: Below 10°C (50°F)

Raw paper which has been stored at a low temperature (by refrigeration) should be set aside and allowed to warm to room temperature prior to being opened. If the paper is taken out of its packaging immediately after being removed from refrigerated storage, condensation will be formed on the paper surfaces, resulting in print color changes and easily damaged surfaces.

The minimum temperature equalization periods are as follows.

20°C (68°F) Temperature Equalization Periods

Unit: hours

Paper Size \ Storage Temperature	-20°C (-4°F)	0°C (32°F)	10°C (50°F)
10.2cm x 186 m (4 in. x 610 ft.)	6	5	3.5

- NOTES**
- Do not heat paper in order to equalize temperatures.
 - Remove paper from refrigeration one day before use.

If exposed paper remains unprocessed for extended periods of time under normal room conditions or is subjected to high temperature and/or high humidity, changes in the color balance and other properties may occur. The time between exposure and development should be fixed in order to obtain consistent quality. Avoid waiting until the next day to develop the exposed paper. Rather than holding the paper for processing the next day, initiate processing as soon as possible.

4. Printing and processing

This paper is designed for use with Fujicolor Paper processing chemicals as CPRA and RA4 type processes. The paper characteristics are optimized for printer systems as mentioned in chapter 18 Calibration data.

5. Control strips

Processing control can be provided through the use of FUJICOLOR CRYSTAL ARCHIVE PAPER Control Strips Process CP-40FA/43FA/47L/48S and 49E.

6. Post –processing print handling / storage

Since prints are usually used for the long term recording of images, as much effort as possible is made to use materials that exhibit the least amount of change overtime. The effects of high force during folding, light, heat, oxygen in the air, contaminating gases, humidity and mold cannot be completely avoided. It is advised to use low forces during assembling the album. Also the change in the photographic image or base material are minimized

by maintaining the appropriate storage conditions for prints, such as those used by museums and art galleries. Temperature and humidity control is the most important key to minimizing the change that occurs in prints. Prints stored in the dark under the following conditions may be expected to show almost no change over time.

Storage period with almost no change	Temperature	Relative Humidity
More than 20 years	Below 10°C (50°F)	30% — 50%
10 — 20 years	Below 25°C (77°F)	30% — 50%

Notes on Photo Album storage.

When prints have been assembled and mounted, it is recommended to store the album at a place as free as possible from hot and extreme humid conditions, and away from direct sunlight and other strong light, or from direct illumination. The following are examples of undesirable storage conditions.

- Storage in a room closet facing a wall exposed to cold outside air (which may cause condensation).
- Storage in a place near the ceiling, such as an attic, the top of a closet or cupboard (where high temperatures may occur).

7. Light sources for viewing

When inspecting finished color prints, it is essential that an illumination source will be used that has superior spectral characteristics, adequately high color temperature and sufficient brightness. This is because results can appear different, depending on light quality. For precise results, prints should be examined under the conditions designated by ISO 3664-2009. As a general guide, the following conditions are recommended.

Color Temperature : 5000 ± 300 K
 Average Illumination : 500 Lux or more
 General Color Rendering Index : Ra 90 or more*

* To attain these values, special fluorescent lamps designed for color evaluation (e.g. EDL type) should be used.

When inspecting finished prints be careful to shut out all external light and colored reflected light.

8. Paper surface available

FUJICOLOR CRYSTAL ARCHIVE PREMIUM HDX X-Tra Coat is available in Glossy and Matte surface.

9. Paper thickness

FUJICOLOR CRYSTAL ARCHIVE PREMIUM HDX X-Tra Coat is: 215 µm

10. Back printing

This product has no back printing.

11. Markings (Box/Emulsion numbers)

11.1 Box markings



"+" indication: spliced baby roll is/are packed.

11.2 Bag labelling



"+" indication means that a splice is present in the baby roll.

11.3 Emulsion numbers

Emulsion numbering will be in ascending order from Eyx-xxx at introduction.

Note:

FUJICOLOR paper is marked with a three digit emulsion number followed by an additional three digit number which is provided for production control purpose only. Should any problem arise with FUJICOLOR CRYSTAL ARCHIVE ALBUM HIGH DEFINITION PAPER, the additional three digit number suffix to the emulsion number should be indicated on the claim.

12. Technologies incorporated in this paper

12.1 Base paper technology

Specially designed base paper having unique characteristics is used for this product. Optimized paper thickness will result in improved leafing through of photo albums with double sided pages.

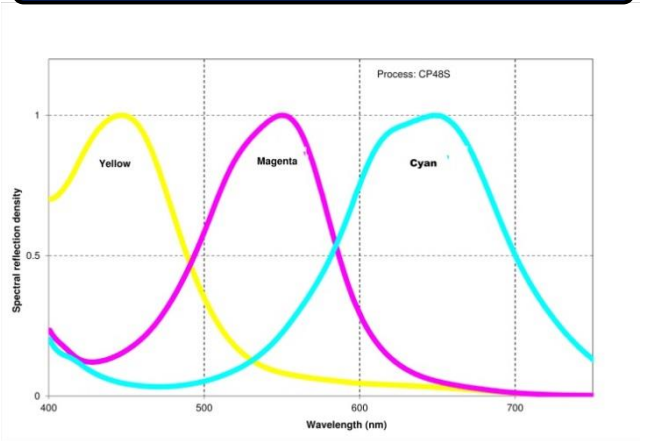
12.2 X-Coupler Technology

Through the incorporation of a latest designed cyan coupler (X-Coupler Technology), which features a molecular structure developed by Fujifilm's proprietary technologies, this paper is capable of reproducing colors of high purity, such as vibrant blues and reproducing the subtle shades of green and of forming reds.

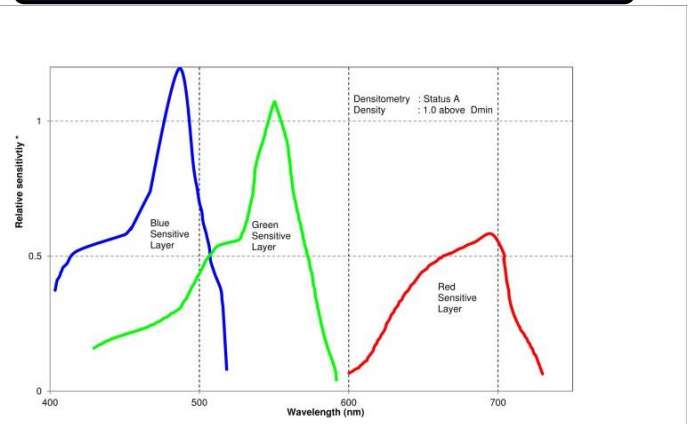
12.3 Top layer Technology

Specially designed X-tra coat toplayer contains components which will result in high resistance against sticky surface at high humidity (extreme environmental conditions) and fingerprints.

13. Spectral dye density curves

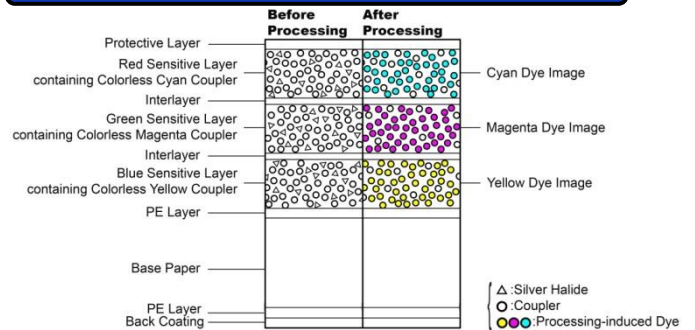


14. Spectral sensitivity curves



* Sensitivity equals the reciprocal of the exposure (J/cm²) requires to produce a specified density

15. Paper structure



16. Sizes available

Width \ Length	Box packaging	
	90 m (295 ft)	180 m (590 ft)
15.2 cm (6 in.)		■
20.3 cm (8 in.)		■
25.4 cm (10 in.)		■
30.5 cm (12 in.)		■
45.7 cm (18 in.)	■	

17. Calibration data

Fujicolor Crystal Archive Premium HDX

Equipment	Brand	Name	Latest Software	Calibration data		Basic calibration ymcd	Intermittance rgb	Thickness
				LUT + Target density RGB				
				Glossy	Matte			
Frontier		3 series	Installer R	LUT D + surface indication		n.a.	n.a.	n.a.
		5 series	Installer R	LUT D + surface indication				
		7 series	V 4.01	LUT D-1	LUT D-2			
Noritsu		QSS 28x ~ LP24Pro	Vol.2 7.20	174		n.a.	n.a.	n.a.
		35xx, 37xx	Vol.3 N4.54	174				
Agfa		DLab 1, 2, 3		2.20 / 2.20 / 2.15	2.15 / 2.15 / 2.10	0.97 / 1.00 / 1.02		
KIS		DKS 15x, 16x, 17x		Printer defines own and highest possible Dmax settings (exposure vs chemistry relation)				
ISAG		Fastprint		2.20 / 2.20 / 2.15	2.15 / 2.15 / 2.10	n.a.	n.a.	0.22
		Wideprint 8", 12"		174		n.a.	n.a.	n.a.
		Wideprint R2R		174		n.a.	n.a.	n.a.
ZBE Chromira		SE, Pro, R2R		2.20 / 2.20 / 2.15	2.15 / 2.15 / 2.10	n.a.	n.a.	n.a.
Polielettronica		Laserlab 50/76		Printer defines own and highest possible Dmax settings (exposure vs chemistry relation)				
Durst		Epsilon		2.20 / 2.20 / 2.15	2.15 / 2.15 / 2.10	0.004 / 0.056 / 0.000 / 0.920	90 / 50 / 37	n.a.
		Zeta						
		Theta 50/51				170.2 / 112.0 / 0.0 / 104.3		
		Theta 76/76HS				0.006 / 0.085 / 0.000 / 1.325	101 / 56 / 42	

All recommended Dmax values can only be reached when using high active chemistry equal to Fujifilm CPRA Digital Pro AC and Fujifilm ADM chemistry
For competitive and recycling chemistry the Dmax should be reduced with -0.10 density

Media target and ICC Profile location: <https://www.fujifilm.eu/eu/support/photofinishing/color-management>

18. Technical Support

In case abnormalities are found when using this FUJICOLOR CRYSTAL ARCHIVE PREMIUM HDX X-Tra Coat please contact your local Fujifilm subsidiary and/or distributor.

Relevant Fujifilm subsidiary and/or distributor contact information can be found on the following internet address:
<http://www.fujifilm.com/worldwide/>

Notice: The data herein published were derived from materials taken from general production runs. However changes in specification may occur without notice

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