

# Available Color Aerial Photographic Materials—1975

**I**N 1974 A LIST of the color aerial photographic materials available in North America was compiled as part of the work of the Color Committee of the American Society of Photogrammetry. The list, along with descriptions of some of the characteristics of the materials, was published in the December, 1974, issue of *Photogrammetric Engineering*. Such a list tends to become obsolete rather quickly; since there were some known changes to be made, it was decided to update it at this time.

Basically, the format of the accompanying chart (Table 1) is the same as that previously published. A significant addition to the data, however, is that the products of another manufacturer have been included. Where several products are similar in photographic characteristics but differ in base thickness, the primary product is listed in the chart

\* Chairman, Sub-Task Committee on Films for Color Photography, American Society of Photogrammetry.

proper, and those similar to it are listed in the footnotes. The column of Aerial Exposure Indexes has been deleted. It is believed that Aerial Film Speed specified by American National Standard PH2.34-1969 is now well established since it is over six years old. Therefore, a dual system should no longer be maintained. Other changes are relatively minor.

Caution should be exercised in comparing the characteristics of one manufacturer's products with those of another, because any differences in measuring techniques or equipment used by that manufacturer to derive the data may be reflected in the values shown.

The chart does provide a current list of the products available, some general information on their characteristics, and enough specific data so that preliminary selection for a particular project can be made. More detailed information on any of the products can be obtained from the manufacturer.

(Table 1 on next page)

## Footnotes for Table 1:

<sup>1</sup> Data are supplied by the manufacturers, and thus may not be comparable from one manufacturer to another owing to different equipment and conditions under which the measurements were made. The data for some special-order products may represent averages for relatively few coatings but are the best currently available.

<sup>2</sup> Aerial Film Speeds and Effective Aerial Film Speeds are for use with the new KODAK Aerial Exposure Computer, Kodak Publication No. R-10 (12/70 edition) in determining the correct camera exposure for aerial (air-to-ground) photography. Aerial Film Speeds and Effective Aerial Film Speeds are not equivalent to, and should not be confused with, conventional film speeds used in pictorial photography. Aerial Film Speed as defined in ANSI Standard PH2.34-1969 for black-and-white negative aerial film is  $3/2E$ ; E is the exposure (in meter-candle-seconds) at the point on the characteristic curve where the density is 0.3 above gross fog. Effective Aerial Film Speeds are values determined for films, such as infrared-sensitive and color, and films not processed under the conditions specified in the Standard. All the speed values given on this chart were obtained by rounding the calculated values to the nearest  $2^{1/3}$  step (equivalent to  $1/3$  f-stop).

<sup>3</sup> Information on processing and the literature listed can be obtained from the manufacturers.

<sup>4</sup> Also available as KODAK AEROCROME Infrared Film 3443 (ESTAR Thin Base) with a base thickness of 2.5 mils.

<sup>5</sup> Some coatings of this film have been manufactured with a clear gel backing and a nominal total film thickness of 5.1 mils.

<sup>6</sup> With a KODAK WRATTEN Filter No. 12.

<sup>7</sup> Also available as KODAK High-Definition AEROCROME Infrared Film (ESTAR Base) SO-127, with a 4-mil base and KODAK High-Definition AEROCROME Infrared Film (ESTAR Ultra-Thin Base), SO-130, with a 1.5-mil base.

<sup>8</sup> Also available as KODAK Aerial Color Film (ESTAR Ultra-Thin Base), SO-255, with a 1.5-mil base.

<sup>9</sup> Suggested trial exposure. Generally several filters are required, the specific ones depending on the product.

TABLE I. AVAILABLE COLOR AERIAL PHOTOGRAPHIC MATERIALS.

Film (Camera)	Film Number	Description	Type	Base		
				Thick (mils)	Type	Backing
AGFA AVIPHOT Color	CN	Unmasked color negative film of medium speed	Neg	4	Acetate	Clear Gel
AGFA AVIPHOT Chrome	CT	Color-reversal high-speed film	Pos	4	Acetate	Clear Gel
GAF 1000 Blue Insensitive	2575	High-speed color reversal film for water penetration and other applications	Pos	4.5	Acetate	None
GAF 200 Aerial	2230	High-speed, color-reversal film for aerial photography	Pos	4.5	Acetate	None
GAF Color Aerial Negative	CF 705	High-speed, color-negative film for reconnaissance and aerial surveys	Neg	4	Acetate	None
KODAK AEROCOLOR Negative (ESTAR Base)	2445	High-speed, color-negative film for mapping and reconnaissance	Neg	4	Polyester	Fast Drying
KODAK AEROCHROME MS (ESTAR Base)	2448	Color reversal film for low-to-medium altitude aerial mapping and reconnaissance	Pos	4	Polyester	Fast Drying
KODAK AEROCHROME Infrared (ESTAR Base)	2443 <sup>4</sup>	False-color reversal film for vegetation surveys and camouflage detection	Pos	4	Polyester	Fast Drying <sup>5</sup>
KODAK High Definition AEROCHROME Infrared (ESTAR Thin Base)	SO-131 <sup>7</sup>	Slow-speed, high-resolution, false-color film for high-altitude reconnaissance	Pos	2.5	Polyester	Clear Gel
KODAK Aerial Color (ESTAR Thin Base)	SO-242 <sup>8</sup>	Slow-speed, high-resolution film for high-altitude reconnaissance	Pos	2.5	Polyester	Clear Gel
KODAK EKTACHROME EF AEROGRAPHIC (ESTAR Base)	SO-397	High-speed, color-reversal film for aerial mapping and reconnaissance	Pos	4	Polyester	Fast Drying
Film (Duplicating and Printing)						
AGFA DUPLICHRROME	D 13	Cut sheet color-reversal duplicating film	Pos	7	Acetate	Gel
CIBACHROME—Transparent Type D	661	Dye-bleach reversal film for duplicating aerial transparencies	Pos	7	Polyester	Slightly Matte Gel
GAF Color Diazo Duplicating	Cyan 202LC Magenta 302LC Yellow 502LC	Color diazo materials for color composites from black-and-white color separations	Pos	5	Acetate	None
KODAK AEROCHROME Duplicating (ESTAR Base)	2447	Low-contrast, color-reversal film for making duplicate transparencies	Pos	4	Polyester	Fast Drying
KODAK EKTACOLOR Print (ESTAR Thick Base)	4109	Cut sheets for making color diapositives from 2445 film	Neg	7	Polyester	Clear Gel
Reflection Print Materials						
AGFACOLORPAPER RC	310	Rolls and sheets for making prints from color negatives	Neg		RC Paper	
CIBACHROME-Print CCP-D	182	Rolls and sheets for making reflection prints from color transparencies	Pos	7	Acetate	Matte Gel
GAF RC Color Print Paper	7200A LR	Rolls and sheets for making prints from color negatives	Neg		RC Paper	
KODAK EKTACOLOR 37 RC Paper		Rolls and sheets for making prints from color negatives	Neg		RC Paper	
KODAK EKTACHROME RC Paper		Rolls and sheets for making prints from color positive transparencies	Pos		RC Paper	

Illuminant	Effective <sup>1</sup> Aerial <sup>2</sup> Film Speed	Resolving <sup>1</sup> Power		Granu- larity <sup>1</sup>	Process <sup>3</sup>	Literature <sup>3</sup>
		1000:1	1.6:1			
Daylight		80	40		CN	} Agfa-Gevaert Trade Publications
Daylight		80	40		CU	
Daylight	640	80	40	45	AR-1C AR-2C	
Daylight	125	100	50	25	AR-1C AR-2C	
Daylight	64	80	40	25	C-22	
Daylight	100	80	40	13	AERO-NEG Color	M-70, M-29
Daylight	32	80	40	12	EA-5	M-29
Daylight	40 <sup>6</sup>	63	32	17	EA-5	M-69, M-29
Daylight	6	160	50	9	ME-4 (Modified), EA-5	
Daylight	6	200	100	9	ME-4 (Modified), EA-5	M-74
Daylight	64	80	40	13	EA-5	M-78
	<u>Exposure<sup>9</sup></u>					
3200°K	10 sec at 2 ft cndl	100			P-10	Tech Data Book No. 22
U.V.		>1000			Diazo	
3000°K	3 sec at 3 ft cndl	125	63	8	EA-5	M-72
3200°K	10 sec at 1 ft cndl	125	63	16	C-22	
					85	
3200°K	10 sec at 1 ft cndl	41			P-10 (4 Step) P-18 (3 Step) CCP	22 } Tech 25 } Data 23 } Book No.
GAF Color Print Chemistry 7201—LR EKTAPRINT 3 Chemicals EKTAPRINT 300 Chemicals EKTAPRINT R-5 Chemicals EKTAPRINT RD Chemicals						