

Film Data Sheet

T-51HC

4 x 5 Black & White Sheet Film



Film Speed

320 ISO/ 26 DIN

Format

4 x 5 in. (10.16 x 12.7 cm)

Sheet film

Image Area

3¹/₂ x 4⁵/₈ in. (9 x 11.7 cm)

Finish

Glossy

Exposures per Unit

20 exposures per box

Development Time

30 seconds at 75°F

Description

High contrast, 4 x 5 positive and negative sheet film for detailed black and white prints.

Key Applications

- Copystand photography
- Fingerprint documentation
- Graphic arts

Compatible Hardware

- Any camera or instrument equipped with a Model 545/545i film holder
- 4 x 5 view cameras
- FreezeFrame Plus (w/ optional 4 x 5 film holder)
- MP-4+ camera

Special Treatment

Requires print coating of the positive and clearing of negative (Sodium Sulphite solution)

To re-use the negative, it must be immersed in a sodium sulfite clearing bath immediately after development. Sodium sulfite powder is readily available from professional photographic supply dealers and chemical supply houses.

Mix in the following proportions:

Warm Water: 2 liter or 70 oz. (fluid)

Sodium Sulfite Powder: 440 grams or 16 oz. (weight) (anhydrous/desiccated)

Slowly add the powder to the water; stir continuously until all powder is dissolved. Allow to cool to approximately 70 F (21 C) before using. Store the solution in brown, well-stoppered bottles or in a tank with a floating lid.

Caution

This film uses a small amount of caustic paste. If any paste appears, avoid contact with skin, eyes and mouth and keep away from children and animals. If you get some paste on your skin, wipe it off immediately, then wash with water to avoid an alkali burn. If eye contact occurs, quickly wash the area with plenty of water and see a doctor. Keep discarded materials away from children, animals, clothing and furniture.

Full Warranty

See information on the film box.

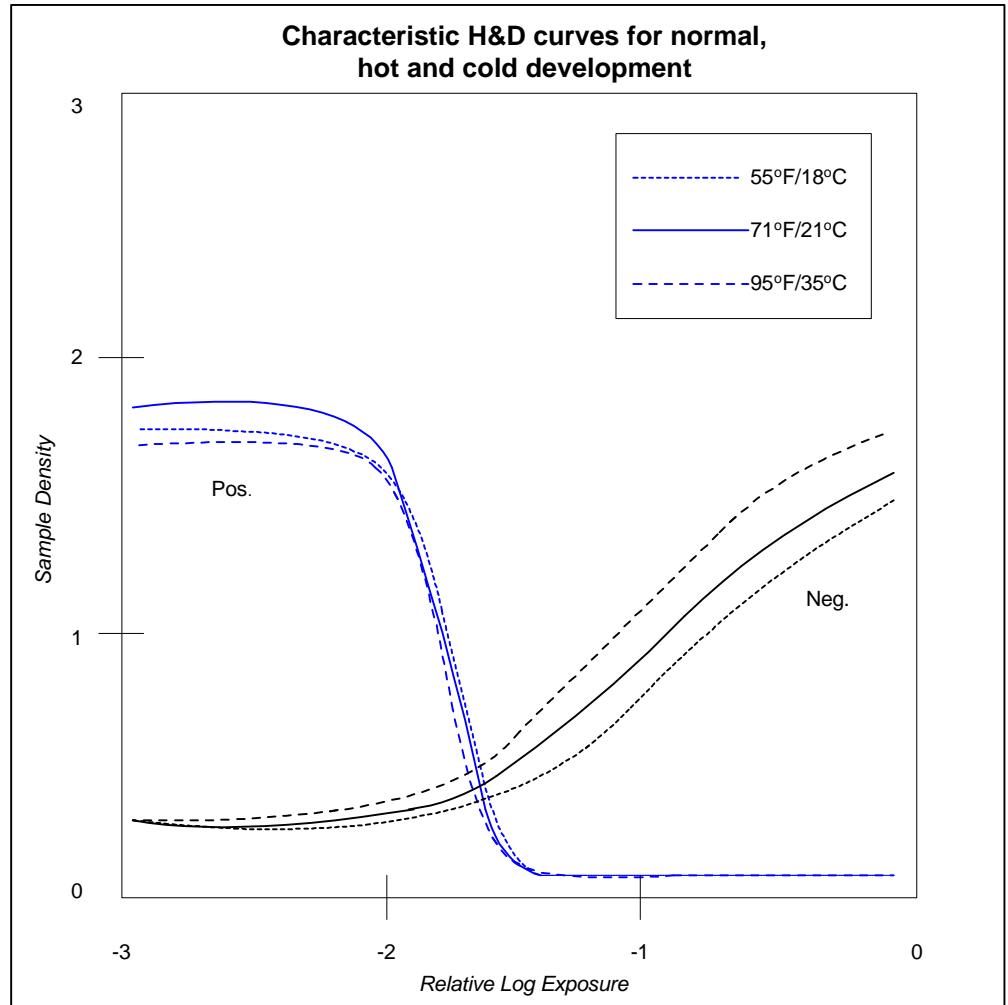
Film Data Sheet
 Technical Data

Type 51HC High Contrast (4x5 sheet)
 Instant B&W Peel-Apart Film



This information represents the typical performance of Polaroid Type 51HC Film.
 Specific film lots may vary.

Recommended speed (ISO)-	Print: 320/26° @ 5500°K 200/24° @ 3200°K Negative: 50/18o @ 5500°K 32/16o @ 3200°K
Recommended processing time and temperature	30 sec. at 71°F/21°C
Spectral sensitivity	Panchromatic
Resolution (1000:1)	20-23 line pairs/mm (print) 100-120 line pairs/mm (negative)
Contrast	High (print) Medium (negative)

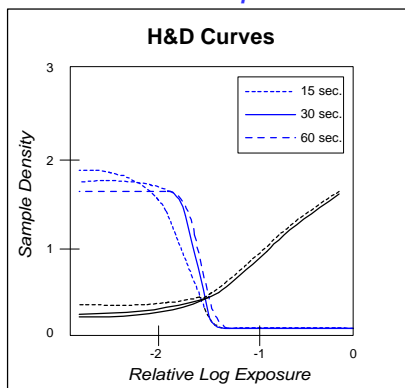


Processing time and temperature

For best results process at temperatures above 60°F(16°C).

°F	°C	Time in seconds
70-95	21-35	30
65	18	40
55	13	50

H&D as a function of over/under development



Effect of over/under development

Beyond compensating for the effects of high and low temperatures, this film can be over or under developed for positive contrast modulation. Over development produces higher contrast and lower densities in the positive. Under development results in lower contrast. Neither over nor under development has any significant effect on the negative contrast. Under development can result in an increase in negative D-Min.

D-Max: The density value for the film's darkest black.
D-Min: The lowest density value that a film exhibits. In prints, the whiteness of the brightest highlight, relative to the unprocessed print.
Slope: The positive ratio of the log E increments of the straight line region of the curve, as determined by the 1/4-3/4 increment method. The slope of an H&D curve indicates the overall contrast of a film: low contrast slopes less than 1.10; medium contrast slopes from 1.10 to 1.70; high contrast slopes greater than 1.70.

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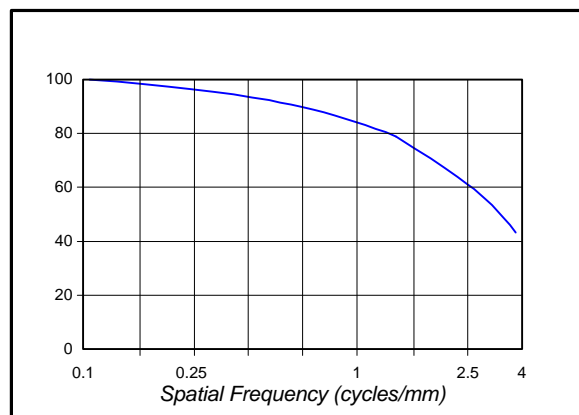
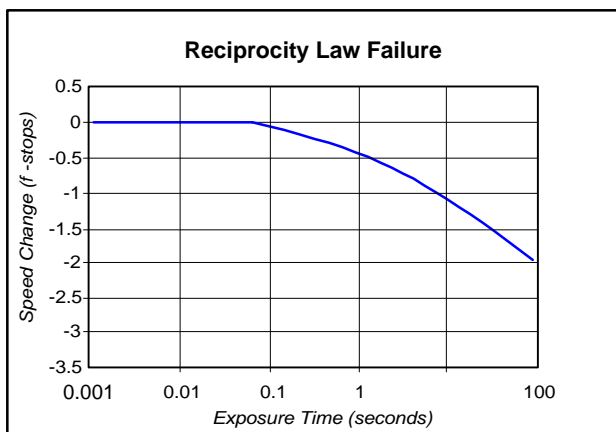
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Reciprocity law failure

A wide range of shutter speeds can be used without loss of film speed. For longer exposure times, some exposure compensation is suggested.



Effective ISO relative to color temperature

3200°K	4800°K	5500°K	6500°K	7500°K	10,000°K
200/24°	-	320/26°	-	-	400/27°

Preparing an 18% sodium sulfite solution

Ingredients	Metric	U.S.
Warm water	2.0 liters	70 fl. Oz.
Sodium sulfite (anhydrous)	440 grams	16 oz. (avdp.)

Filter factors

	Filter no.	6	8	12	15	25	32	44	47	58
Light source at 3200°K - Tungsten	Aperture adjustment (f-stops)	1/3	1/3	1/2	2/3	2	2	3	3 2/3	2 2/3
Light source at 5500°K - Daylight	Aperture adjustment (f-stops)	2/3	1	1 1/3	1 1/3	3 1/3	1 2/3	2 2/3	2 2/3	3

Processing the reusable negative

In order to remove the reagent layer and the anti-halation dyes, the processed negative needs to be washed in an 18% sodium sulfite solution. The salts within the solution minimize swelling in the negative's gelatin layer that would be caused by washing in water only. Swelling can cause reticulation which would remain after the negative dries.

Reciprocity: The ability of the film to respond in a constant manner to a constant exposure (light intensity x time). Reciprocity failure occurs during very long or very short exposures, requiring the photographer to increase exposure.