

## Technical Data

### ST8.D

#### AGFA Orthochromatic Sound Recording Film.

*AGFA ST8.D is an optical sound recording film which has been designed for recording optical digital sound tracks such as Dolby SR.D tracks as well as analogue sound tracks.*

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#### **General properties.**

AGFA ST8.D optical sound recording film is a very high contrast, orthochromatic black and white film with extremely high definition and ultra-fine grain. The excellent properties of this sound recording film have been achieved by coating an extra thin emulsion layer on a clear polyester base of 125 µm. A permanent grey antihalation undercoating (AHU) is coated between the emulsion and the base. An anti-static layer, which also improves transport in the sound camera, is coated on the back of the film.

#### **Exposure.**

##### **- Digital sound tracks:**

For the exposure of optical digital sound tracks such as Dolby SR.D, an adapted sound camera is used which exposes the analogue and digital tracks simultaneously. The optimum densities for the tracks are determined by making a series of density tests on the sound negative and a print. The densities, which give the best results with the user's quality control system, are selected for full-scale production.

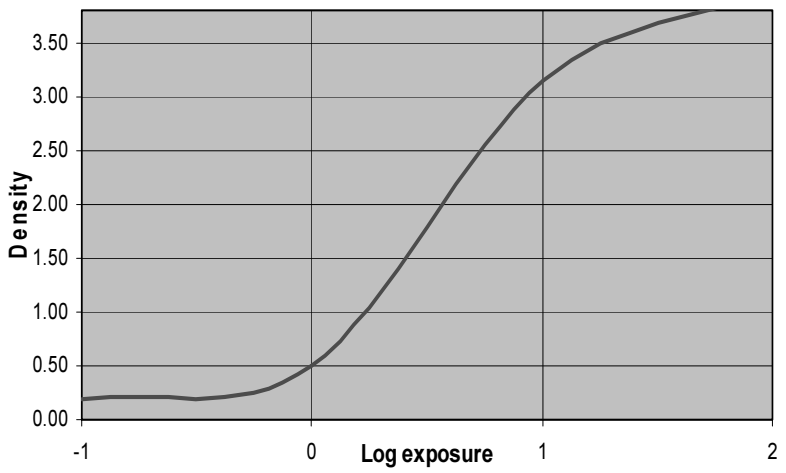
For SR.D use, aim densities are less critical (the B&W patterns merely contain on/off information). The recommended visual aim density for an SR.D sound negative is approx. 1.60. The print density (densitometer status A) should be around 1.3. For other digital sound systems, contact your local Agfa representative.

Experience has shown that for analogue sound half of the value of the density in the sound negative can be used as aim density in the print. A combination leading to good cross modulation results could be 2.50 for the sound negative and 1.25 for the print.

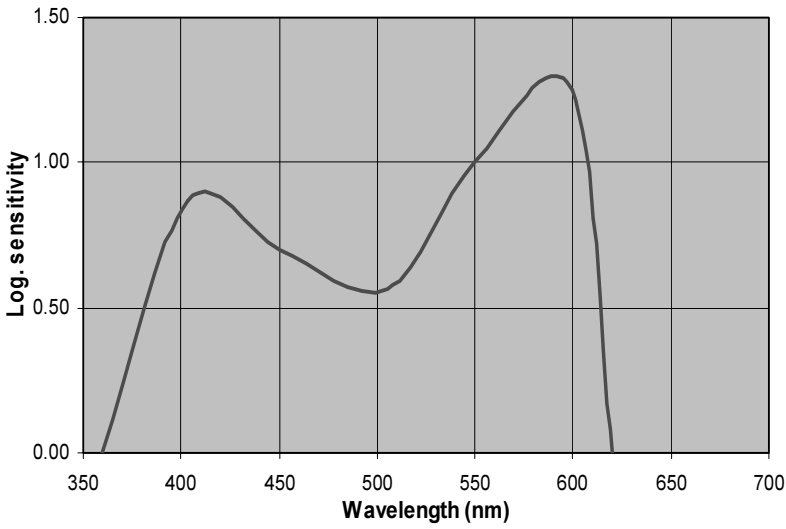
##### **- Analogue sound tracks:**

A conventional sound camera is used for recording analogue sound tracks. The aim densities of the sound negative and print are determined by means of cross modulation tests. A normal, analogue visual negative density is between 2.20 and 3.50.

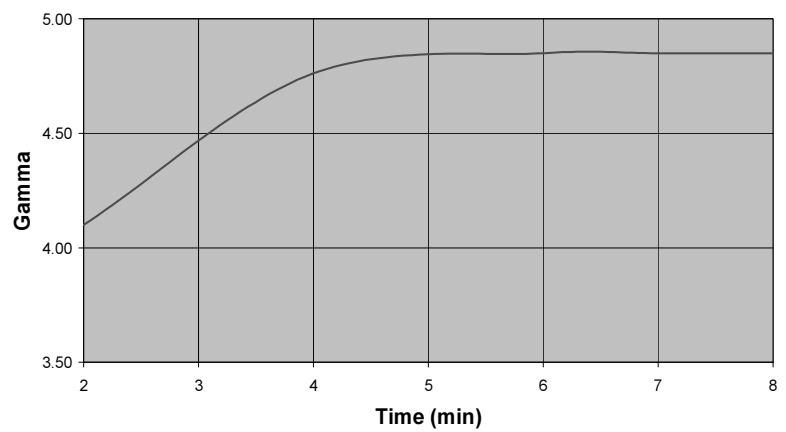
**Sensitometric curve.**



**Spectral sensitivity curve.**



**Gamma - time curve.**



Exposure : tungsten (3200 K)  
 Processing : D-97, 5 min at 23° C (73° F)  
 Densitometry : diffuse visual

## Processing.

AGFA ST8.D should be processed in a typical developer for black and white positive film, e.g. developer D-97.

Other black and white developers, including the alternative formula using ascorbic acid, may give similar results but must be checked by means of sensitometric and cross modulation tests.

<b>Developer D-97</b>	
Water	800 ml
Metol	0.5 g
Sodium sulphite anh.	40 g
Hydroquinone	3 g
Sodium carbonate anh.	17 g
Potassium bromide	2 g
Water to make	1000 ml
pH	10.15 +/- 0.05
Recommended development time and temperature	5-6 min at 23° C (73° F)

Replenisher D-97 R	35 mm	16 mm
Replenishment rate ml/305 m (1000 ft)	6500	3250

## Base.

ST8.D orthochromatic emulsion is coated on a polyester base with a thickness of 125 microns.

## Spectral sensitivity.

The spectral sensitivity of AGFA ST8.D has been optimised to produce its peak sensitivity in the region used for exposure of the digital sound track such as for the Dolby SR.D system. This modification of the spectral sensitivity has resulted in a speed increase of

## Current product range.

Width	Length	Perforation	Core	Winding	Order code
35 mm	624 m/2040 ft	2R P 4740	CNP 3	E.I.	3OT5G
35 mm	312 m/1020 ft	2R P 4740	CNP 3	E.I.	3TO3X
35 mm	624 m/2040 ft	2R S14 7605	CNP3	E.I.	3TSUX
16 mm	624 m/2040 ft	1R S2 7605	CSP33	E.I.	3TTLJ

about 2/3 stop in comparison with the previous sound negative film AGFA ST8.

## Safelight.

AGFA ST8.D should be handled in complete darkness. Alternatively, a dark red safelight (e.g. E.K. no. 2) can be used. However, exposure to the safelight must be kept as short as possible to reduce the risk of fogging the film. Handle the film at a safe distance from the safelight at all times.

Always determine the practical light level, the tolerable time of exposure to the safelight and the working distance by means of tests.

## Splicing.

Splices in a sound negative film are to be avoided. If splicing is necessary, the splice should be carried out with an ultrasonic splicer. It is also recommended to silence the splice by means of punch blooping.

## Film edge information.

Latent image edge information on AGFA ST8.D is situated between the edge of the film and the perforation. It consists of a 3-digit perforation machine no., a 6-digit emulsion no. and the AGS (Agfa-Gevaert Safety Film) abbreviation.

## Storage.

### - Raw stock in original package :

medium-term storage : at room temperature;  
long-term storage : at average temperature of 8° C (40° F) or lower. When the film is removed from cold storage, allow warming up to prevent telescoping of the roll, moisture condensation and spotting.

### - Exposed film :

Process as soon as possible. If the film cannot be developed immediately after exposure, it should be stored in a taped can as cool as possible.

### - Processed film :

Refer to the latest standards as described in ANSI IT 9.11, ISO 5466 or SMPTE RP 131.



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