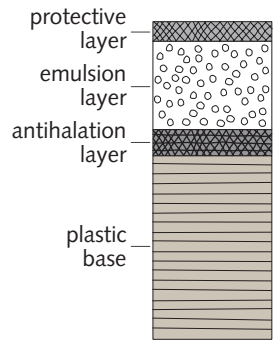
Allen Frame, *Man in Pool, Mississippi, 1997*

Photographers select one film over another for both practical and aesthetic reasons. Working in low-light conditions, Frame needed a high-speed film so he could use a fast enough shutter speed to handhold his camera. But the resulting coarse grain also adds a gritty look that helps give the picture an unsettling and mysterious mood. © Allen Frame; courtesy of Gitterman Gallery, New York, NY.

3 Black-and-White Film



Cross section of black-and-white film

There are many different types of film available and different reasons to use each type. Sometimes your choice of film is a practical matter; for instance, you may need a film sensitive enough to make a picture in low light. Other times your choice will be aesthetically driven; perhaps you need a film that reproduces all the subject's textures and tones as smoothly as possible. Whatever your choice, it's highly likely that the film you use will have a noticeable effect on the way the picture ultimately looks.

Black-and-white films consist of a clear, flexible, plastic support, called the **base,** coated with a microscopically thin **emulsion**. The emulsion is a chemical compound of light-sensitive **silver halide** crystals suspended in gelatin. It is coated with a protective layer to minimize scratching (and other physical damage caused by handling) and backed by an **antihalation layer** that helps promote image sharpness.

Film Characteristics

Different films often have strikingly distinctive characteristics, but sometimes the variations are quite subtle. These are the most important characteristics of black-and-white films:

film speed
grain
tones
contrast

Film speed. **Film speed** is a measurement of how sensitive a film is to light. A film that is highly sensitive to light is called a **fast film,** or just "fast"; a film with low sensitivity is a **slow film,** or just "slow."

The most common way to quantify film speed is according to its **ISO** (International Standards Organization) rating. A film with a higher ISO number needs less light to properly capture an image than a film with a lower ISO number. For example, ISO 400 film is more sensitive to light than ISO 100; it will take four times more light to properly expose ISO 100 film as it will take to properly expose ISO 400 film (400 ÷ 100).