

September 24, 1998

RE: Request for Material Safety Data Sheets on X-ray Films

Dear Sir/Madam:

Articles are exempt from MSDS requirements under the Occupational Safety and Health Standards, 29 CFR 1910.134. The Agfa radiographic films are such articles, therefore, no MSDS are available for them.

We have found that very often customers who request MSDS for articles such as photographic film and paper are either mistaken about the regulatory requirements or need product information for another purpose, e.g. Disposal, silver recovery or local fire inspectors. Enclosed is a product information sheet that will hopefully answer questions about the products.

If you have any question regarding this matter please feel free to contact me. I can be reached at 201-440-2500 extension 4778 or E-mail susan.borea.b@bayer.com.

Sincerely,

Susan Borea
Sr. Customer Applications Engineer
Environmental and Safety Department

1. Article Name: Commercial name of the film.
2. Article Type: Photographic film, intended for (application)
3. Composition:

Black and white photographic film mainly consists of a polyethylene terephthalate support(>80 weight %), coated on one or on both sides with a thin emulsion layer. Such layer is mainly composed of gelatin and small amounts of light sensitive silver halide crystals. In order to provide the desired physical and acnaitomertic properties, small amounts of dyes, matting particles, fillers, wetting agents and other components are added. On processing the negative black and white film, the silver halide is converted into metallic silver in the exposed area of the film, whereas in the non-exposed areas. The silver halide is removed from the film in the fixing bath. With direct positive black and white film, the situation is just the opposite.

4. Health and Safety

4.1 General: photographic film will not cause any special health or safety hazard, when used as intended.

4.2 Health aspects: with respect to the health and safety aspects related to the products used for the photochemical processing of the film we refer to the Material Safety Data Sheets (MSDS) of said products.

4.3 Fire hazard and extinguishing media:

The support is made of polyethylene terephthalate and meets the Safety Film specifications as described in ANS/ISO 543-1990. Safety photographic film passes the ignition time test when ignition time is >10 min. . It passes the burning time test when the burning time is >45 sec. For a film thickness >0.08 mm or when the burning time is > 30 sec. For a film thickness <0.08mm. The nature of the combustion products is

dependent on the physical characteristics of the burning process and on the degree of combustion. Incomplete combustion generates a spectrum of different gasses, e.g. Water vapor carbondioxyde, carbonmonoxide and small concentrations of organic and inorganic degradation products.

With respect to photographic layers, distinction has to be made between developed and non-developed material.

Combustion of non-developed film can lead to the formation of hazardous gases(e.g. Halogen compounds); the nature and the amount of such gases is depending upon the particular conditions of the combustion process. Developed film does not contain any silverhalied compounds anymore.

Upon burning, developed films do not set free any hazardous gases, expect for the volatile inorganic degradation products.

Fire extinguishing media: Water spray, carbon dioxide, extinguishing powder or foam.

5. Waste disposal

In most countries photographic film is considered as industrial waste and consequently it is not allowed to dispose of it as household waste.

The regulations about waste disposal may differ from one country to another. Please consult the local regulations on the subject matter.

We recommend to have waste photographic film be hauled away by a licensed company for recovering the silver.

When the photographic film waste is disposed of through incineration, we refer to par1.3 relating to the composition of the fumes.

6. Transport and labeling regulations

Photographic film is an article and as such it is not subject to the regulation on transport, labeling, health, safety and environment that apply to chemical substances and preparations. Tiansboundary transport of silver-containing waste is subject to legislation based on the Basel Treaty and OECD Rules.

7. Storage

For specific information regarding optimal storage of this film, we refer to the general instructions for use of this article.