

Molecular Sieve Acid Scavenger



Molecular Sieve Acid Scavenger from Kodak for Moisture Free Film Storage and Extended Dye Images

Long-term storage of film has been an industry concern since the beginning of motion pictures. Moisture, temperature, acids and vapors from the atmosphere that surround stored film have an impact on the life expectancy of motion picture film.

"Vinegar Syndrome", is a term used to describe the chemical reaction that goes on during the deterioration of cellulose triacetate film support. When cellulose triacetate begins to decompose, "deacetylation" occurs and the acetate ion reacts with moisture to form acetic acid producing a vinegar odor when a can is opened. Once the reaction is started, it cannot be stopped.

Molecular Sieve is a promising new technology developed by Eastman Kodak Company, that has the ability to retard the vinegar syndrome reaction. Simply stated, the inclusion of Molecular Sieve with processed motion picture film in a sealed container has the ability to extend the life of the dye images and film support beyond that which is currently considered normal.

When Should The Molecular Sieve Be Used?

Molecular Sieve can be introduced at any stage of film storage, but is most effective when introduced at the earliest opportunity (after lab processing and before storage).

How to Use the Molecular Sieve

Molecular Sieve is held in a semi-permeable packet of Tyvek™ - which allows vapors to be easily scavenged and contained.

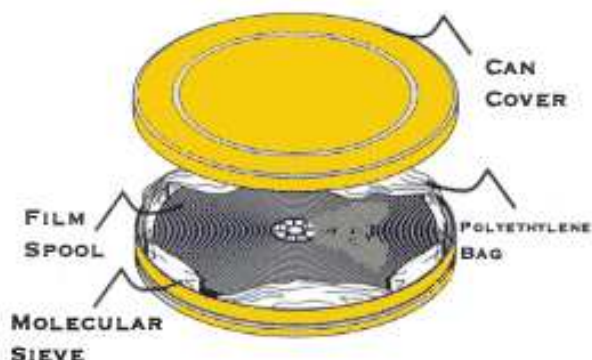
The Molecular Sieve packets should be placed evenly around the outside circumference of the film roll. The packets can be folded lengthwise for 16mm applications. Film and Molecular Sieve packets are then inserted in a polyethylene plastic bag. The bag should be folded over within the container.

If you decide not to use a bag, the can should be sealed with moisture proof tape. It is important that the container be clean and rust free.

Each Molecular Sieve packet contains 12.5 grams of Molecular Sieve desiccant. Using the proper amount of Molecular Sieve is important for optimum storage results. Never use more than the recommended amount.

The following chart indicates the appropriate amount of packets for different formats and roll sizes as well as placement within the container.

Film Type	Size	No. of Molecular Sieve Packets
35 mm	2,000-foot roll	6
35 mm	1,000-foot roll	3
16 mm	2,000-foot roll	3
16 mm	1,000-foot roll	2
In general, three packets, each containing 12.5 grams per 1,000 linear feet of 35mm film are recommended.		



Tips on Using Molecular Sieve

Molecular Sieves have the ability to absorb moisture from the air quickly. For maximum effectiveness care should be taken to minimize transfer time. Store unused Molecular Sieves in their original moisture proof container.

Molecular Sieve is water reactive. Material can react with water liberating extreme heat. The Tyvek™ packet provides protection from direct contact with Molecular Sieve. Avoid using damaged or torn packets.

Molecular Sieves are supplied in strips of 6 packets. Each packet contains 12.5 grams. Scissors may be used to cut single units from a strip. Cut only in heat sealer areas. Be careful not to cut into the packet.

NAPM 1T9, 11-1992 Storage Standard recommends inspection of the film at least every two years to detect any changes in its condition. Molecular Sieve packets should be replaced every two years if stored at ambient temperatures and every 10 to 15 years if stored at NAPM recommended conditions of 2°C at 20-30% relative humidity.

Because of loss of effectiveness, we do not recommend rejuvenation.
