



When we think of proper storage and conditioning for our films, we automatically think **avoid heat - humidity** and **direct sunlight** and while yes those are all still very important rules to follow especially during the summer, we often fail to take into consideration the extreme cold temperatures during winter months and the negative effects it can cause on our films.

Understanding Proper Storage Conditions

The first step is to understand that the top and most important factor which can affect a film's performance and shelf life are **improper storage conditions**. A warehouse environment at ambient storage condition for plastic films is always strictly recommended as follows:

- Controlled Storage temperature is best at 70-72°F (20-22°C) and should never exceed 24°C.
- Maintaining the controlled storage temperature in your storage facility is crucial, especially if you notice huge temperature variations due to day & night temperature and seasonal changes
- Relative humidity should be maximum 50%
- Store in a dry, clean and flat surface away from dust and debris
- Avoid storage areas in direct sunlight

How do extreme cold temperatures affect the integrity of a film?

Most plastics at room temperature show their familiar properties of flexibility and high resistance to cracking but when the temperature significantly decreases this can change rapidly and many common plastics become brittle and crack.

Low temperatures can be a lot more harmful to plastics than high temperatures, resulting in:

- Embrittlement
- Cracking upon Impact
- Physical Deformation
- Breakdown of a film's performance and shelf life
- Possible \$\$ loss



Furthermore, low temperatures bring in snow, rain and also increase our need to crank up the building's central heating system to keep our office warm- cozy for us but not our films. If the heat is not properly controlled, it can leak into your storage areas and thus allow moisture and humidity to build up and cause blocking.

Methods to Maintain the Integrity of your films in Cold Temperature Environments

Following these tips will ensure you continue to keep the integrity of your films in top shape allowing for spectacular and seamless processing.

- Always maintain your films in a controlled temperature and relative humidity environment
- Allow your films to properly acclimate before handling, especially if handling occurs in different room/areas of your building
- Consider cold crack resistance additives in the films you purchase..