CONSIDER COST AND PERFORMANCE WHEN EVALUATING MEDICAL DEVICE FLEXIBLE PACKAGING.

Bringing a new medical device to market in a flexible package can be a long and arduous process. Even after the device has been proven to be safe and effective enough to obtain the necessary FDA approvals, the manufacturer must still decide on the appropriate packaging. If the device is not sufficiently protected from exposure to oxygen and/or moisture vapor, its effectiveness can be compromised. If the flexible packaging material is not sufficiently strong to withstand puncture by sharp edges, its integrity can be adversely affected. At the same time, however, if the cost of protection becomes excessive, the pricing of the packaged device can render it non-competitive. The trick is to balance the cost of the packaging against the degree of protection it provides, and that depends on the characteristics of the device itself.

How sensitive to oxygen is the device? Can it tolerate small amounts of oxygen or moisture vapor without being adversely affected, or will even minute amounts compromise its performance? The answer to these questions will help to determine the properties of the packaging film selected. In general, films with superior oxygen and moisture barrier properties are more expensive per unit of weight than those providing a lower degree of protection. Their ability to provide greater protection in a thinner gauge than more permeable films, however, may make them a more economical choice for a given package.

The film selection process can be even more complicated when the device must be simultaneously protected against both oxygen and moisture vapor. This is because some films with superior oxygen barrier properties are more permeable to water vapor and vice versa. In many cases, a laminate of two complementary films may be a more economical solution than any single film by itself. In any case, it is absolutely essential to know the exact degree of protection that the device itself requires.

Another consideration is the physical characteristics of the medical device itself. Does it have sharp edges? What about protrusions that can exert higher force against a small area of the film? Again, packaging films having superior puncture resistance are generally more expensive than those more easily penetrated, but a stronger film in a thinner gauge may be more economical than a thicker gauge of a film with lower puncture resistance.

Another factor that must be taken into account when evaluating medical device packaging is sustainability, which is becoming increasingly important in today's marketplace. That's why it is advantageous to work with a supplier like LPS Industries, who offers a wide selection of packaging materials, as well as the knowledge and experience necessary to apply them to your particular application.

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About LPS Industries

LPS Industries was founded in 1959 by John M. Robinson as a converter of military specification barrier materials. Today, under the direction of Madeleine D. Robinson, CEO, LPS Industries is a diversified manufacturer and leader in the flexible packaging industry, providing packaging solutions for a diverse range of markets, including medical, food, transportation, electronics and agricultural. LPS Industries is an ISO 9001:2008 registered company and a woman owned and operated enterprise. For more information on the company's products and services, please visit www.lpsind.com.