



# *Cheese*

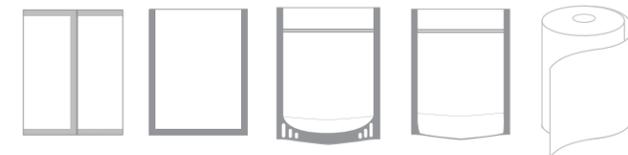
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**FLAIR**

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# Cheese Packaging Solutions with Flair



Flair has been providing cheese packaging solutions since 1992. Whether you are looking for a custom designed VFFS or HFFS film or a stock pouch, our experts will work with you to recommend the right structure to maintain freshness and increase shelf life, keep your filling and machining processes running smoothly, and protect your product throughout the distribution channel. Flair Flexible Packaging combines top quality with award-winning graphics and valuable industry experience to become your true packaging partner. We provide flexible packaging solutions from start to finish.



## DID YOU KNOW?

■ **CATEGORIES** One way to classify cheese is by moisture content:

1. Fresh (very high moisture content) – ex. Feta and Ricotta
2. Soft (moisture content > 63%) – ex. Brie and Boursin
3. Semi-soft (moisture content of 54-63%) – ex. Gouda and Gorgonzola
4. Hard (moisture content of 49-63%) – ex. Cheddar and Monterey Jack
5. Very hard (fat-free moisture content < 51%) – ex. Parmesan and Romano
6. Blue – injected with a specific species of penicillium causing mold growth and very distinctive flavors

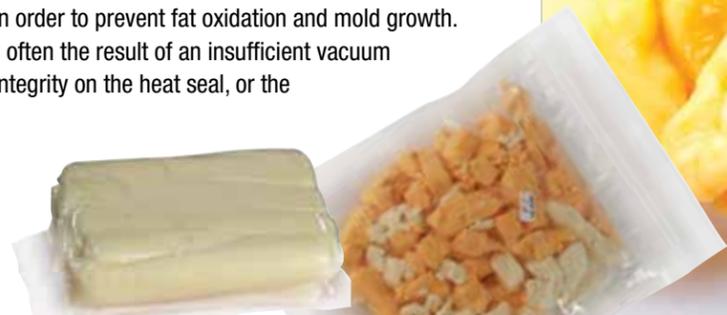
■ **SHELF LIFE** Water vapor, light, and oxygen all affect the quality of cheese. Light and residual oxygen lead to the oxidation of fats, which contributes to “off” flavors in the cheese. Reducing head-space volume and minimizing residual oxygen are both important to increasing the shelf life of cheese.

■ **OXYGEN BARRIERS** Different types of cheese require different oxygen barrier properties. For instance, aged cheeses need a high barrier, while Swiss cheese requires a very low barrier. Our experts can help guide you through the best packaging options for your product.

■ **TIME TO MAKE THE CHEESE** Production and consumption of cheese predates recorded history. Many people believe it began around 8000 BC in the Middle East around the time when sheep were first domesticated. The conversion of milk into cheese occurs in four distinct phases:

1. Coagulation – changes in casein lead to the formation of a protein network called coagulum
2. Drainage – separation of the whey to obtain a curd
3. Salting – incorporation of salt
4. Ripening or Curing – enzymes act on the curd to create biochemical changes

■ **MOLD** Packaging materials used for cheddar cheeses must provide a sufficient barrier to oxygen in order to prevent fat oxidation and mold growth. Surprisingly, though, mold is often the result of an insufficient vacuum inside the package, lack of integrity on the heat seal, or the packing room environment.



## EXPECT THE BEST FROM YOUR CHEESE PACKAGING MATERIALS

Flair Flexible Packaging offers nearly unlimited custom engineering and/or custom printing capabilities to make your packaging idea a reality. In addition, we provide a comprehensive stock program to allow for lower-cost options, to create unprinted packaging ready-for-labeling, or to accommodate faster turn-around times. Our stock program includes:

■ **THERMOFORMING FILMS** Flair stocks both high and standard barrier non-forming (2.8 and 4 mil) and forming films (4,5,6,7 and 9 mil). Custom structures are available for peelable applications, alternative seal layers, or rotogravure printing.

■ **HFFS FILMS** provide outstanding sealability, clarity and machinability for all cheese HFFS applications. Exceptional oxygen barrier properties and stress-crack resistance characteristics extend shelf-life and increase aroma protection for retail size chunk cheeses.

■ **LIDDING FILMS** Our lidding films include peelable structures for C-PET, A-PET, PVC, PS, PE and PP containers as well as nonpeelable structures for PP and HDPE containers or trays. We can also produce custom printed lidding films or individual die cuts made from foil and metallized structures.

■ **POUCHES** Flair's modern production facilities use state-of-the-art equipment to produce:

- FlairPak 300, 350, 400, and 500 premium vacuum pouches
- Prezippered pouches (made from FlairPak 350 that opens at the bottom for filling)
- High Barrier Clear Front/Printed Back pouches



## FRESH IDEAS ADD CONVENIENCE

Increasingly, consumers make choices based on convenience. Notched or scored packaging provides an easy-open solution. Pre-zippered pouches offer a great reclosable option. And easy-peel lids keep products like cottage cheese fresh yet easy to access.

At Flair, we strive to find ways for simple, useful packaging to help set your product apart from the crowd. Talk to your Flair Sales or Customer Support Representative for expert advice on packaging solutions.

◀ Custom prezippered high barrier pouch for shredded cheese



## FLEXIBLE FILMS 101: GLOSSARY OF TERMS

**EVOH** - Ethylene-Vinyl Alcohol copolymer is used in coextruded plastic films to improve oxygen barrier properties. It is, however, a poor water vapor barrier. Even its otherwise excellent OTR (oxygen transmission rate) is sensitive to high humidity. Therefore, for packaging applications, it is usually the core layer of co-extruded plastic films where it is shielded from moisture by protective layers of polyethylene. It's OTR also depends on its VOH (vinyl alcohol) content.

**Hot Tack** - Hot tack is the measure of heat seal strength before the seal is cooled, which is very important for high-speed packaging operations.

**LDPE** - Low density polyethylene is used mainly for heat-sealability and in bulk packaging.

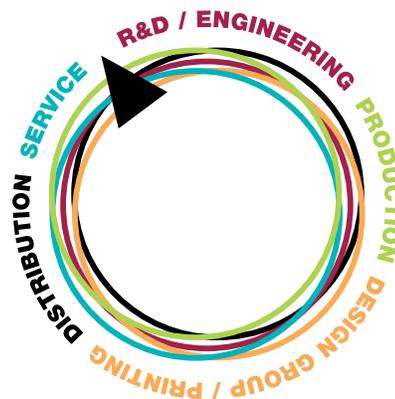
**LLDPE** - Linear low density polyethylene is tougher than LDPE and has better heat-seal strength. LLDPE has higher haze than LDPE.

**Nylon** - The nylon family is made up of polyamide resins with very high melting points, excellent clarity, and stiffness. Two types are used for films: nylon-6 and nylon-66. The latter has much higher melt temperature thus a better temperature resistance, but the former is easier to process and is less expensive. Both have good oxygen and aroma barrier properties, but they are poor barriers to water vapor. In addition, nylon films can be cast.

**PP** - Polypropylene has a higher melting point, and thus better temperature resistance, than PE. Two types of PP films are used for packaging: cast and oriented.

**PE** - Polyethylene is a family of addition polymers based on ethylene. It can be different densities based on its structure.

**PET** - Polyester (Polyethylene Terephthalate) is a tough, temperature resistant polymer. Biaxially oriented PET film is used in laminates for packaging where it provides strength, stiffness, and temperature resistance. It is usually combined with other films for heat-sealability and improved barrier properties.



## WE'VE GOT YOU COVERED

Your product doesn't just need a package. It requires a package that works. One that captures a consumer's attention. A package so convenient that it instills loyalty.

At Flair, we understand that packaging becomes a solution when it combines innovation, impeccable quality, and impact delivered on time. Even if you never have us reverse-engineer a structure or never use our award-winning design group, you still benefit from the big-picture approach to all we do at Flair.

**Flexible Packaging Solutions...From Start to Finish.**



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