

Pack-Age™



Protection You Can Trust™

Natural cheese ripening in film.

Pack-Age™ – an innovative ready-to-use packaging solution for the natural ripening of hard to semi-hard cheese. The cycling heroes of yesteryear used to stuff newspapers under their tops to protect them from the wind and freezing temperatures. In stark contrast, today's professional cyclists wear high-tech clothing featuring breathable membranes and wind stoppers. DSM, the global life sciences and materials sciences company, has adapted this high-tech clothing technology to the world of cheese, and has developed Pack-Age™, a revolutionary new cheese ripening solution that not only offers complete protection to all your favorite cheeses, but also allows them to ripen to the perfect flavor.

There are two conventional processes for the ripening of hard to semi-hard cheeses. The most traditional way, known as 'natural ripening', involves air-drying the cheeses during ripening, and applying a coating to protect them from external factors. The other process, used to obtain young cheese, involves packing the cheese in a seal-tight film straight after brining. This film-packed cheese has a typical flat taste, and is soft and rindless.

With Pack-Age™ – the newly developed packaging solution for ripening cheese – you can now ripen your cheese 'naturally' in a film. The packaging film is moisture-permeable, so cheeses can still dry under air as they do in the natural ripening process. When combined with Delvo®Cid (a natural mold and yeast inhibitor) the selective gas permeability of the packaging offers the best possible protection against yeast and mold growth.



The key features of Pack-Age™ film:

- optimal cheese value (higher yields, reduced operational costs)
- ripened flavor and natural dry rind
- about the same texture as that of naturally ripened cheese
- with Delvo®Cid, greater protection against yeast and mold growth
- 5-10% lower carbon footprint compared to coated cheese
- opportunities to develop new and outstanding cheeses

Natural ripening in Pack-Age™ film

DSM's Pack-Age™ cheese-ripening solution can be used to ripen semi-hard to hard cheeses and obtain a natural taste, texture and dry rind. The food-contact-approved ripening solution is based upon the perm-selectivity of the polymer structure, which enables complete control of the moisture level and the gases passing through. As the packaging is moisture-permeable, during ripening the cheese will dry as natural ripened cheeses would, and its taste, texture and dry rind will all develop in a similar way. When applied to Gouda cheese, the new packaging has resulted in moisture loss falling by as much as 50% (see graph below). Its polymer blend and layer structure can be fine-tuned to obtain the best possible naturally ripened cheese.



Pack-Age™ bags:

a ripened flavor and natural texture at a higher yield

During ripening, each cheese develops its own particular balance in flavor and texture. A comparative tasting session at NIZO¹⁾ proved that DSM's Pack-Age™ cheese-ripening bags can still provide this balance even with a 50% reduction in moisture loss. The texture of the cheese ripened in the Pack-Age™ bags was about the same as that of naturally ripened cheese. As far as the overall flavor was concerned, Pack-Age™ ripened cheese closely followed the naturally ripened cheese. The film-ripened cheese finished bottom of the pile.

Greater protection: Pack-Age™ with Delvo[®]Cid

When treated just once with Delvo[®]Cid, the Pack-Age™ ripening film provides superior protection against yeast and mold growth.

Easy to use

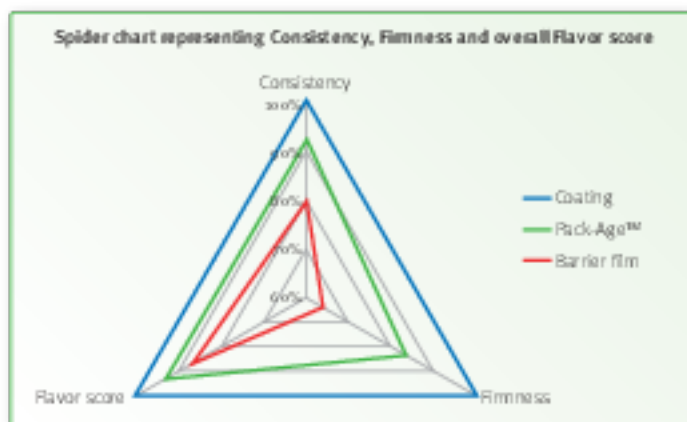
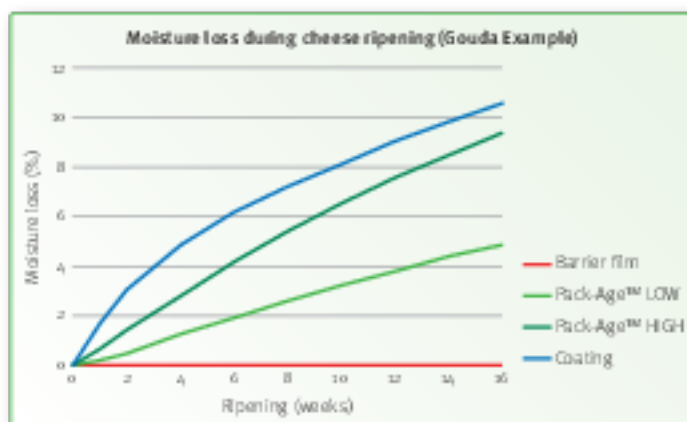
Today DSM's Pack-Age™ cheese-ripening film can be applied in the form of a ready-to-use vacuum bag, whereas a roll-fed thermoform solution is under development. Both options can be tailor-made to meet your specific needs (e.g. size, degree of permeability, printing, and the like). Another advantage of DSM's new ripening solution is that the rind does not need to be removed prior to slicing and grating, saving time and increasing productivity.

Substantial carbon footprint reduction

Compared to coated cheese, Pack-Age™ saves 1,320 kg CO₂ per kg sliced cheese. An extensive Life-Cycle-Analyses show Pack-Age™ realizes a 5-10% lower carbon footprint.

New cheese varieties, and greater cheese quality

Pack-Age™ can be fine-tuned to meet your own specific needs, and thus enable you to produce a variety of new and outstanding cheeses. This revolutionary, ready-to-use packaging will be all you need to set unprecedented cheese-ripening standards. So what are you waiting for? Contact us and we will introduce the cheese-ripening techniques of the future in your company, today.



Unlimited experience

With over a century of experience under its belt, DSM is in the perfect position to offer unparalleled expertise in a variety of sectors, from the production and application of effective preservation solutions (through its DSM Food Specialties division – a pioneer in natamycin-based products), to materials for barrier and specialty films for the packaging industry (through its DSM Engineering Plastics division). DSM Specialty Packaging's Pack-Age™ cheese-ripening solution offers the best possible combination of value, cheese taste and texture, and preservation quality.



¹⁾ NIZO food research is one of the world's most advanced, independent contract research companies.

For Protection You Can Trust™, please contact us now.
info.food@dsm.com | www.dsm.com | www.protectionyoucantrust.com

DSM – Bright Science. Brighter Living.™

Although diligent care has been used to ensure that the information provided herein is accurate, nothing contained herein can be construed to imply any representation or warranty for which we assume legal responsibility, including without limitation any warranties as to the accuracy, currency or completeness of this information or of non-infringement of third party intellectual property rights. The content of this document is subject to change without further notice. Please contact us for the latest version of this document or for further information. Since the user's product formulations, specific use applications and conditions of use are beyond our control, we make no warranty or representation regarding the results which may be obtained by the user. It shall be the responsibility of the user to determine the suitability of our products for the user's specific purposes and the legal status for the user's intended use of our products.

The General Terms of Conditions of Sale of DSM Food Specialties B.V. apply to and are part of all our offers, agreements, sales, deliveries and all other dealings. The applicability of any other terms and conditions is explicitly rejected and superseded by our General Terms and Conditions of Sale. The current version of our General Terms and Conditions of Sale can be found at: www.dsm.com, a hard copy will be forwarded upon your request.