



DAIRY



PROCESSED CHEESE

FUNCTIONALITY THAT PERFORMS

Texture, stability, and process control for demanding cheese applications

SUPPORTING THE RIGHT CHEESE SYSTEM FOR EACH APPLICATION

Some products need firmness, clean slicing and good stackability. Others require a soft, spreadable body with controlled moisture retention. Some must melt in a stable and predictable way. Others are developed with a stronger focus on cost optimization, raw material flexibility or alternative formulation design.

At Lasenor, we support these needs with practical formulation solutions. Our **SWISSGUM® D** stabilizing systems help improve texture, mouthfeel, creaminess, elasticity and water control across a wide range of cheese applications. For manufacturers looking for greater formulation flexibility, we also offer **SWISSGUM® S** hydrocolloids as single ingredients, as well as **SWISSGUM® BIO** stabilizing systems for organic processed cheese.

In slice over slice cheese applications, **RELISER SC** helps prevent sticking between slices, preserve product integrity and improve line efficiency during stacking and packaging.

**Different applications. Different technical needs.
One clear objective: consistent performance**

MORE THAN CHEESE. A FUNCTIONAL SYSTEM.

Processed and analog cheese products are not defined solely by flavor. Their success depends on how the system performs during processing, filling, packaging, and final use.

In the production of processed cheese, the cheese's ripening process is stopped. This extends the product's shelf life while maintaining its properties and quality.

In these applications, texture is only one part of the picture. Emulsion stability, pH control, moisture management, protein functionality, and process consistency are equally important. The product must not only look right but also behave reliably, batch after batch.

In both cases, the main challenge is the same: building a stable cheese system with the appropriate functionality for the target application.

TWO CONCEPTS. ONE FUNCTIONALITY MINDSET.



PROCESSED CHEESE

Processed cheese is a product made by grinding, blending, melting, and emulsifying one or more cheeses with heat and emulsifying salts. Its structure results from transforming the original cheese protein network into a new system with different physical and microbiological stability.



ANALOG CHEESE

Analog cheese is made by combining dairy and/or non-dairy proteins, fats, emulsifying salts, starches, flavorings, colorings, and other ingredients to replicate the functional, nutritional, and organoleptic characteristics of natural cheese. The process is technically similar to that used for processed cheese.

Why this distinction matters

The two categories are not exactly the same, but from a formulation point of view they are closely related. In both cases, the final result depends on:



Balance between protein, fat & water



Control of pH & mineral interactions



Correct use of emulsifying salts



Design of the target texture



Robustness of the process

DESIGNED FOR DIFFERENT END-USE TARGETS

Not all processed or analog cheese products are expected to behave in the same way. Different formats require different technical priorities.

Sliceable and Block Formats

These products need firmness, clean cut, dimensional stability and a well-controlled emulsion. They must remain stable during cooling, slicing and packaging, without becoming friable or sticky.

PRODUCT & APPLICATION

PRODUCT	APPLICATION
SWISSGUM D-3025-N	Direct slicing (SOS and/or IWS)
SWISSGUM D-3044	Blocks which are sliced later on
SWISSGUM D-3360	Feta type cubes
RELISER SC	Avoid stickiness between slices

Spreadable Formats

Spreadable applications require a softer, more hydrated and homogeneous structure. Smoothness, gloss, easy spreading and stable water retention become more important here.

PRODUCT & APPLICATION

PRODUCT	APPLICATION
SWISSGUM D 3363-B	Cream cheese in cups
SWISSGUM D-3310	Cheese spreads in jars or cups
SWISSGUM D-3107	Triangles wrapped in aluminium foil

Meltable and Cookable Formats

For hot applications, performance under heat becomes critical. The product must melt in a controlled way while maintaining the intended texture, appearance and sensory profile.

PRODUCT & APPLICATION

PRODUCT	APPLICATION
SWISSGUM D-3348	Bake-stable cheese fillings
SWISSGUM D-3183	Pizza cheese

Cost-Optimized and Alternative Systems

Analog cheese is especially relevant where cost, dietary targets or raw material flexibility are important. Its formulation may include vegetable fats, soy-based proteins, starches and hydrocolloid, while still targeting a cheese-like flavour and functionality.

PRODUCT & APPLICATION

PRODUCT	APPLICATION
SWISSGUM D-3301	Block and sliced cheese imitates
SWISSGUM D-3374	Low salted white cheese
SWISSGUM S85	Increase water binding capacity
RELISER SC	Avoid stickiness between slices or inside the packing

WHERE PERFORMANCE IS WON OR LOST

A good cheese system starts with good raw materials. The source is very clear on this point: good processed cheese cannot be made from poor raw materials. Cheese type, degree of maturation, physicochemical profile and microbiological quality all influence the final result.

Another critical factor is pH. The type and quantity of emulsifying salts must be selected based on the raw material's active acidity and the intended final product. The source places the optimal pH of processed cheese mass between 5.4 and 5.8, underscoring how closely pH control is linked to texture and processability.

Water management is equally important. Water is not just a neutral component. It affects hydration, consistency, spreadability, and overall physical

stability. In analog cheese, hydrocolloids are specifically used to retain the required amount of water and help build the target texture. Their selection depends on solubility, moisture absorption, hot viscosity, compatibility with milk proteins, organoleptic impact, and both physical and microbiological stability.

Finally, the process itself matters. The process should be done under vacuum in a cooker, either with direct steam or indirect heat-treatment (double jacket cooker). Temperature, holding time, steam, agitation and pH all act as process regulators in processed cheese manufacture. For analog cheese, the source describes a typical fusion step at **70-95 °C for 3 to 10 minutes**, followed by packaging and chilled storage.

TYPICAL DEFECTS

When a cheese system is not well balanced, the defects are usually very visible.

Flavour defects

The source lists weak, atypical, or overly acidic flavor as a common issue when there is insufficient mature cheese in the blend or when the mix is dominated by acid-tasting raw materials. Feed-like flavor, bitterness, and rancidity are also described, as is alkaline flavor caused by excess or inappropriate selection of emulsifying salts.

Texture defects

Texture-related defects are just as important. The source refers to:

- Sandiness, linked to calcium pyrophosphate or calcium orthophosphate crystal formation and/or to not well dissolved protein
- Friable texture, associated with overmature cheese or an unsuitable pH
- Floury texture, caused by high acidity and insufficient emulsifying salt
- Sticking to aluminium foil, linked to immature raw materials, poor protein hydration or inadequate moisture distribution

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