

## About us

*Prayon is a leading producer of purified phosphoric acid and food-grade phosphates. Our food applications laboratory enables us to meet market requirements and offer innovative products in line with the latest trends in the food industry.*

Food-grade phosphates are produced using high-quality purified phosphoric acid.

The Prayon Group has a global reputation for its phosphoric acid technology. Jointly owned by the Office Chérifien des Phosphates (OCP) and Société Régionale d'Investissements de Wallonie (SRIW), the Group consists of more than 20 companies in more than 10 countries. It employs over 1,400 people and generates a turnover of approximately €680 million (2010).

With production facilities in Belgium (Engis and Puurs), France (Les Roches de Condrieu) and the USA (Augusta, Georgia), Prayon produces a full range of purified phosphoric acids, sodium, potassium and calcium phosphates and blends mainly used in the meat, poultry, seafood, baking and dairy industries.

### Food-grade purified phosphoric acid and phosphates supplied by Prayon:

- are controlled using an HACCP approach on all production lines and are ISO 22000 certified;
- meet current legal requirements;
- are kosher- and halal-certified.

Phosphates perform a wide range of functions in processed food products. These include protein modification, sequestration of minerals that may catalyse oxidative rancidity and pH adjustment in meat, poultry and seafoods.

Baked goods are leavened with phosphates that contribute to texture, colour, rise and desirable crumb characteristics.

The smooth mouthfeel, even melt and sliceability of processed cheeses benefit from the buffering capacity and protein dispersion properties provided by phosphates.

A variety of beverages are acidified by purified phosphoric acid.

Phosphates are also widely used to balance the mineral content of foods (Na, K, Ca, etc.).



## We achieve our goals through strong ethics and solid core values

- **Customer-focused:** We listen to your needs and fulfil your requirements. We are competitive and flexible.
- **People-oriented:** We value the experience, creativity and professionalism of our employees. We are a winning team.
- **Technology:** We maintain state-of-the-art facilities through continuous process improvement and innovation.
- **Quality of life:** We practise Responsible Care. We believe in sustainable development. We are committed to enhancing the quality of life.



ISO 9001 (Quality) / OHSAS 18001 (Health/Safety) / ISO 14001 (Environment) / ISO 22000 (Food Safety).  
Our food-grade phosphates are allergen-free, GMO-free and BSE-/TSE-free.



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Visit the group website for more information  
[www.prayon.com](http://www.prayon.com)

**PRAYON SA**  
Rue Joseph Wauters 144  
4480 Engis - Belgium  
☎ +32 (0)4 273 93 58  
✉ +32 (0)4 275 68 36  
E-mail: [sales2services@prayon.be](mailto:sales2services@prayon.be)

Design by  [www.globeleu.com](http://www.globeleu.com)

# Phosphates

## for cheese and dairy products

Kasomel™ emulsifying salts are used to produce the desired texture in processed cheese. They are a critical part of the production process.



## Food phosphates for dairy applications

Food-grade phosphates are used in a wide range of dairy applications, including processed cheese, cheese sauces and dips, milk-based beverages (liquid and dry), non-dairy creamers, fermented dairy products, instant puddings and cheesecakes, cream-based soups, ice cream, and dessert toppings.

With their unrivalled ability to buffer pH, chelate minerals and modify protein charges, phosphate salts are ideal for helping to set desired texture and control shelf life.

### Processed cheese



Thanks to their considerable ion exchange capability, phosphates are very efficient at dissolving the cheese casein network and enhancing the emulsifying properties of proteins, leading to homogenous, shelf-stable and appetising cheese spreads and blocks. Prayon has developed a range of products specifically for the many different types of processed cheeses.

All Kasomel products are described with a four-digit number. The first digit indicates the ion exchange capability of the melting salt (ranging from 1 ("weak") to 3 ("strong")). The second digit indicates the strength of the creaming reaction that will take place after cooking (also ranging from 1 ("weak") to 3 ("strong")). The last two digits indicate the pH value. Some Kasomel products specifically help to control pH, which is a key factor in controlling the texture of the finished product. These Kasomel salts have a number that usually starts with 11.

Another series of Kasomel products (22XX and 23XX) is dedicated to spreadable cheese production and is very helpful for accurately controlling the creaming reaction rate under various conditions. Lastly, all Kasomel products starting with 31 or 33 provide excellent results for the production of processed cheese blocks.

The processing conditions and type of melting will have an impact on the remeltability of the salt. Please contact us for more information.

### Milk and milk products



DSP (disodium phosphate) is added to fluid milk prior to pasteurisation or spray drying to inhibit protein denaturation during heat treatment and to allow efficient protein dispersion upon rehydration.

Chocolate milk may benefit from the presence of TSPP, which keeps the cocoa in suspension. The purple discoloration of strawberry-flavoured milk may be inhibited by the addition of STPP to bind the iron.

DSP can be used to reduce UHT milk protein coagulation. Long-chain SHMP inhibits UHT milk age gelation.

Buttermilk and cottage cheese can be prepared via direct acidification with phosphoric acid and this product has a shelf life that is longer than the cultured form.

In dairy preparations using alginate as a texturiser, phosphates are ideal for controlling calcium release and, consequently, gel setting.

Non-dairy creamers frequently use DKP to inhibit feathering when the whitener is added to the warm acidic coffee.

DSP, TSPP or SHMP may be added to ice cream to prevent churning of the milk fat.

## Agglomerated Kasomel™

### What is it?

- A process that eliminates the fine particles by "sticking" the blend components together
- Improved flowability of the blend and easier dissolution
- An average particle size distribution of 100 µm



### Benefits

All Kasomel™ blends can be delivered in agglomerated form upon request.

- Convenient to handle (good flowability/dustless)
- No clogging in pneumatic transport or in wet room storage
- Faster pH setting - more accurate blend standardisation



## Food phosphates for processed cheese

	KASOMEL™	ENUMBERS(1)	pH Shift (2)	Properties and Applications
pH BALANCER	KASOMEL™ 1145	E 339	- 0.4 / - 0.5	Acidic pH buffering salt to be used in association with other KASOMEL™ salts. Reduces pH by approximately 0.05 units per 0.1% added.
	KASOMEL™ 1112	E 339	+ 1.2 / + 1.3	Alkaline pH buffering salt to be used in association with other KASOMEL™ salts. Increases pH by approximately 0.1 units per 0.1% added.
SPREADABLE PROCESSED CHEESE/PORTIONS	KASOMEL™ 1110	E 339, E 452	+ 0.3 / + 0.4	Developed specifically for spreadable processed cheese in tubes and glass or plastic cups. Prevents hardening in the finished product. Pumpable fluid processed cheese for the food industry.
	KASOMEL™ 2273 KASOMEL™ A - 2273	E 452, E 450	+ 0.0 / + 0.1	For spreadable and sliceable cheese portions, medium to high fat content. Ideal for Emmenthal or Dutch cheese based products.
	KASOMEL™ 2280 KASOMEL™ A - 2280	E 452, E 331, E 450, E 339	+ 0.0 / + 0.1	For spreadable and sliceable processed cheese portions, medium to high fat content. Particularly suitable for production of processed cheese based on various raw materials.
	KASOMEL™ 2285	E 452	+ 0.1 / + 0.2	For spreadable processed cheese portions, medium to high fat content. Ideal for products made using the UHT process.
	KASOMEL™ 2366	E 452, E 450	- 0.1 / - 0.2	For high-fat processed cheese portions. For spreading or slicing, based on young to medium aged cheese as raw material. Can be used with KASOMEL™ 2394 to alter pH.
	KASOMEL™ 2394	E 452, E 450	+ 0.3 / + 0.4	For high-fat processed cheese portions. For spreading or slicing, based on young to medium aged cheese as raw material. Can be used with KASOMEL™ 2366 to increase pH.
PROCESSED CHEESE BLOCKS	KASOMEL™ 2185	E 331, E 339, E 452	+ 0.4 / + 0.5	For processed cheese with very high remelting capability (for pizzas, toasted sandwiches, etc.). An excellent compromise between firm final texture and remelting capability.
	KASOMEL™ 2172	E 452	+ 0.0 / + 0.1	Designed for liquid paste during cooking and firm final texture.
	KASOMEL™ 3172 KASOMEL™ A - 3172	E 452, E 339	- 0.1 / - 0.2	For processed cheese slices/blocks used for burgers and sandwiches, based on Emmenthal or Dutch cheese. Designed for liquid paste during cooking and rather "elastic" final texture.
	KASOMEL™ 3392 KASOMEL™ A - 3392	E 452, E 450	+ 0.1 / + 0.2	For heat-stable processed cheese blocks. To be used in cordon-bleu production or cheese cubes production for use in meat or fish sausages.
	KASOMEL™ 3138	E 452	- 0.4 / - 0.6	For very firm or heat-stable processed cheese blocks for incorporation in meat or fish sausages, pâtés, etc. Highly viscous paste during cooking.

European legislation permits the use of phosphates in processed cheese up to a maximum limit of 20 g/kg or 2% (by weight) expressed as P<sub>2</sub>O<sub>5</sub> in the final product.

Regulations vary by country.

(1) E numbers: European codification.

(2) Obtained in a cheese-based melt a few days after production and with a dosage of 3% KASOMEL™ calculated according to the cheese mass.

Other Kasomel products are available. For details about our complete range, please contact us at [sales2services@prayon.be](mailto:sales2services@prayon.be)