Cosmetics

Soaps are the oldest, historically documented cosmetic products, e.g. in the cuneiforms of the Ancient Babylonians are references to formulations for the manufacture of soaps for body cleansing. Today surfactants have often taken over the function of soaps as a detergent. Nevertheless, natural soaps and metallic soaps can be found in many cosmetic products.

The following products are manufactured using vegetable origin raw materials and are INCI listed and approved for the application in the cosmetic industry.

**LIGA ZINC STEARATE ZPR-2-V**
Our Zinc Stearate is used in the cosmetic industry as a colourant and anti-caking agent. It is mainly used in creams and ointments and in make-up products, mascaras, eye shadow – for its water repellent and protective agent characteristics. Furthermore, zinc offers the advantage of exhibiting an antibacterial effect, especially in ointments.

**LIGASTAR AL DT/C-V**
This Aluminium Stearate grade is specifically developed for the production of creams and ointments. The product is characterized by its moderate gel strength at a relatively low gelling temperature of 80–120 °C. This results in very stable gels with good application properties. Typical usage depends on the base oil and varies between 1 % to 4 % of the formulation.

**LIGASTAR ALG-V**
LIGASTAR ALG-V is a Distearate produced with vegetable fatty acids and offering the best gelling properties in the range of all Aluminium Stearate grades. It is used in ointments as a rheo-thickening agent and to modify the flowability and the adherence to cosmetic powders and to provide a slight astringent effect.

**LIGA SODIUM STEARATE FPC**
This Sodium Stearate grade is used as an emulsifier and opacifier in the cosmetic industry. However, the largest applications are for the production of deodorant sticks. A solution of about 10 % of LIGA SODIUM STEARATE FPC forms a hard, solid gel under cold conditions. Its performance characteristics are due to its particulate structure and composition ideally suitable for the application. The crystallization tendency of the gel can be prevented by the addition of Glycyerine or lecithin (PME).

**LIGA GLYZERIN 99,5 V PH.EUR**
Glycyerine is known for its water retention properties and therefore offers a very beneficial influence on dry skin. This property is especially favoured and used in creams and lotions. Its low water content is a highly appreciated advantage when used in toothpastes. Furthermore, Glycyerine is used as a preservative and is characterized by its very low content of chlorides and heavy metals. The water content of LIGA GLYZERIN 99,5 V PH.EUR is exclusively vegetable derived and complies with the requirements of the Ph.Eur, USP/NF, BP and DAB.

**LIGA GLYZERIN 86 V PH.EUR**
This grade is characterized by the same unique properties as LIGA GLYZERIN 99,5 V PH.EUR with a glycerine content of 86 %. It therefore offers a lower viscosity that simplifies the handling and processing.
Ligamid® — High Quality Additives for Food

Our products are used as additives in the food industry which exhibit the following features:

- Anti-caking agent
- Flowability agent
- Separating agent
- Creasing agent
- Flocculating agent
- Emulsifier
- Water repellent

Oleogum additives are part of our daily lives – but we are often not aware that these additives are essential auxiliary used in the food, feed, pharmaceutical and cosmetic industry. All presented products below are vegetable based raw materials and are free of impurities, such as dioxides, pesticides and heavy metals. Therefore our products are widely used in the following life science areas.

LIGAFOOD®

Our products are manufactured according to HACCP food safety standards and comply with the FDA regulations for direct food contact (GRAS) and be awarded ISO 22000 at our plant in Venlo, Netherlands.

Due to outstanding production setup, our products are qualified for food industry applications according to the 98/86/EC EG directive of the European parliament registered in the following sections 4.4.10, iodide, potassium and calcium salt of fatty acids. 4.4.70: magnesium salts of fatty acids.

LIGAFOOD MF-2-V

This precipitated Magnesium Stearate (MGS(M)) is based on vegetable renewable raw materials and is very popular in the food industry due to its fine powders (average particle size D50: 7–11 µm) and its high specific surface area of 6–12 m²/g. It is used as a lubricant for tableting cedars and drages and as a binding agent in tableting cedars and tableting powders. Furthermore LIGAFOOD MF-2-V improves the flowability and continuity with its anti-caking effect in certain hydrophobic powdered foods (e.g. spices and herbs) to extend the shelf life of these powders and materials. Due to its specific precipitated production process and the resulting high specific surface area, our LIGAFOOD MF-2-V is very efficient.

LIGAFOOD MF-2-K

This grade is characterized by the same unique properties as LIGAFOOD MF-2-V and is kosher and Halal certified.

PALMSTAR MCST 325

Our direct processed Magnesium Stearate is manufactured from vegetable fatty acids and is used as a lubricant for tableting cedars and drages. It acts as a binding agent and emulsifier in tableting cedars and tableting powders to improve high specific surface area of 6–12 m²/g. Magnesium Stearate improves the flowability and powdered blend continuity. It also acts as a water repellent to extend the shelf life of these powders and materials.

LIGA CALCIUM STEARATE CPR-2-V

Due to its high specific surface area of 6–12 m²/g and its fine powders (average particle size D50: 5–9 µm) this precipitated Calcium Stearate (CSM(C)) is often excellent condition as a lubricant for tableting cedars and drages. Furthermore, it is widely used as an anti-caking agent, carrier, anti-caking agent and as a flowability agent due to its water repellent characteristics. Same as our LIGAFOOD MF-2-V, the production is performed by a specific precipitated production process resulting in high specific surface area and therefore very efficient.

LIGA CALCIUM STEARATE CPR-2-K

This grade is characterized by the same unique properties as LIGA CALCIUM STEARATE CPR-2-V and is kosher and Halal certified.

LIGA SODIUM STEARATE FPC

Our Sodium Stearate is used as a coating agent, emulsifier, release and gelling agent and is indispensable in the food industry. It is used in chewing gum bases, in bakery shortenings and as an aid in the preparation of fat free and low fat corn syrups with a low dextrose content.

LIGA POTASSIUM STEARATE FPC

Our Potassium Stearate offers the same properties as our LIGA SODIUM STEARATE FPC and is preferred as an alternative in formulations where a low sodium content is required.

Feed

Regulations in the food industry are often as or even stricter than in the food industry. Additives that are used in the food industry must not only meet the food regulations but also need to comply with the feed regulations. These regulations are carefully observed by Peter Greven Netherlands.

Calcium, Magnesium, Sodium and Potassium Stearates are registered as feed materials according directive (EU) No. 575/2011 and can be used as feed materials according directive (EC) No. 767/2009.

Key quality characteristics of our products in the feed industry:

- Anti-caking agent
- Flowability agent
- Carrier
- Water repellent
- Release agent
- Coating agent
- Emulsifier
- Dextrose

Pharma

Oleogum additives are among the most important and extensively used excipients in the pharmaceutical industry. Peter Greven began addressing these high quality requirements many years ago and dedicated one plant to the production of pharmaceutical Stearates with vegetable origin.

Our brand name Ligamid® is dedicated to our high quality additives specifically developed for use in pharmaceutical applications. Information about our premium pharmaceutical stearate product portfolio is listed in our Ligamid® brochure. Supplementary to our high quality pharmaceutical product line Ligamid® we also offer a standard Magnesium Stearate.

PALMSTAR MCST 352

Our direct precipitated Magnesium Stearate is manufactured from vegetable fatty acids and is used as a lubricant and flowability agent for manufacturing pharmaceutical, nutraceutical and dietary supplement tablets. PALMSTAR MCST 352 is manufactured in accordance to Ph.EUR and USP/NF grades.
Our products are used as additives in the food industry which exhibit the following features:

- Anti-caking agent
- Lubricant
- Separating agent
- Coating agent
- Fattening agent
- Alteration agent
- Emulsifier
- Water repellent

LIGAFood® High Quality Additives for Food

Our products are manufactured according to HACCP food safety standards and comply with the FDA regulations for direct food contact (GRAS) and are confirmed within the latest Food Chemical Code (FCC). In 2010, Peter Greven became the first Stearate producer to implement a Food Safety Management System and was awarded ISO 22000 at our plant in Venlo, Netherlands. Due to this outstanding production setup, our products are qualified for food industry applications according to the 98/86/EC EG directive of the European parliament registered in the following sections § 470a: calcium, potassium and calcium salts of fatty acids. § 470b: magnesium salts of fatty acids.

LIGAFood MF-2-V

This precipitated Magnesium Stearate (E470b) is based on vegetable renewable raw materials and is very popular in the food industry due to its fine particles (average particle size D50: 5–7 µm) and its high specific surface area of 6–12m²/g. It is used in chewing gum bases, in bakery shortening and as an aid in the preparation of fat free and slack free confectionary with a low density content.

LIGA Potassium Stearate FPC

Our Potassium Stearate offers the same properties as our LIGA SODIUM STEARATE FPC and is preferred as an alternative in formulations where a low sodium content is required.

Feed

Regulations in the feed industry are often as strict as those in the food industry. Additives that are used in the feed industry must not only meet the food regulations but also need to comply with the feed regulations. These regulations are carefully observed by Peter Greven Nederland.

Calcium, Magnesium, Sodium and Potassium Stearates are highly regarded as feed materials according directive (EU) No. 679/2011 and can be used as feed materials according directive (EC) No. 767/2009. Our LIGAFood MF-2-V is very efficient.

LIGAFood MF-2-V

Our direct processed Magnesium Stearate is manufactured from vegetable fatty acids and is used as a lubricant and flowability agent for pharmaceutical excipients. Our LIGA Stearates are characterised by the same unique properties as LIGA CALCIUM STEARATE CPR-2-V and are Kosher and Halal certified.

LIGA Calcium Stearate CPR-2-V

This grade is characterized by the same unique properties as LIGA CALCIUM STEARATE CPR-2-V and in Kocher and Halal certified. This grade is characterized by the same unique properties as LIGA CALCIUM STEARATE CPR-2-V and is used in Kosher and Halal certified.

LIGA SODIUM STEARATE FPC

Our Sodium Stearate is used as a coating agent, emulsifier, release and gelling agent and is indispensable in the food industry. It is used in chewing gum bases, in bakery shortening and as an aid in the preparation of fat free and slack free confectionary with a low density content.

LIGA SODIUM STEARATE FPC

Our LIGA SODIUM STEARATE FPC is an important ingredient used in many feed premixes for its coating and anticaking properties with preformed blends and as an emulifier and gelling agent in liquid blends.

Following products are registered as feed materials according directive (EU) No. 375/2011 in section 12.6.4 as “Salts of fatty acids”:

LIGA calcium Stearate CPR-2-V

LIGA SODIUM STEARATE FPC

Our precipitated Calcium Stearate is used as flowability agent and carrier. Its hydrophilic properties improve stability and fluidity of animal feed. This product is also available as kosher and halal certified quality.

LIGAFood MF-2-V

Our precipitated Magnesium Stearate is used as carrier and flowability agent. Its hydrophobic properties improve stability and fluidity of animal feed. This product is also available as kosher and halal certified quality.

LIGA SODIUM STEARATE FPC

Our LIGA SODIUM STEARATE FPC is an important ingredient used in many feed premixes for its coating and anticaking properties with preformed blends and as an emulifier and gelling agent in liquid blends.

LIGAFood MF-2-V

Our precipitated Magnesium Stearate is manufactured from vegetable fatty acids and is used as a lubricant and flowability agent for pharmaceutical excipients. Our LIGA Stearates are characterised by the same unique properties as LIGA CALCIUM STEARATE CPR-2-V and are Kosher and Halal certified.

LIGA Calcium Stearate CPR-2-V

This grade is characterized by the same unique properties as LIGA CALCIUM STEARATE CPR-2-V and in Kocher and Halal certified. This grade is characterized by the same unique properties as LIGA CALCIUM STEARATE CPR-2-V and is used in Kosher and Halal certified.

LIGA SODIUM STEARATE FPC

Our Sodium Stearate is used as a coating agent, emulsifier, release and gelling agent and is indispensable in the food industry. It is used in chewing gum bases, in bakery shortening and as an aid in the preparation of fat free and slack free confectionary with a low density content.

LIGA SODIUM STEARATE FPC

Our LIGA SODIUM STEARATE FPC is an important ingredient used in many feed premixes for its coating and anticaking properties with preformed blends and as an emulifier and gelling agent in liquid blends.

LIGA SODIUM STEARATE FPC

Potassium Stearate offers the same properties as our LIGA SODIUM STEARATE FPC and is preferred as an alternative in formulations where a low sodium content is required.

Pharma

Oleochemical additives are among the most important and extensively used excipients in the pharmaceutical industry. Peter Greven began addressing these high quality requirements many years ago and dedicated one plant to the production of pharmaceutical Stearates with vegetable origin.

Our brand name LIGAMED® is dedicated to our high quality additives specifically developed for use in pharmaceutical applications. Information about our premium pharmaceutical stearate product portfolio is listed on our LIGAMED® brochure. Supplementary to our high quality pharmaceutical product line LIGAMED® we also offer a standard Magnesium Stearate.

PALMSTaR MGST 325

Our direct processed Magnesium Stearate is manufactured from vegetable fatty acids and is used as a lubricant and flowability agent for manufacturing pharmaceuticals, nutraceuticals and dietary supplement tablets. PALMSTaR MGST 325 is manufactured in accordance to USP32 and USP35/GMP guidelines.
Our products are used as additives in the food industry which exhibit the following features:

- Flowability agent
- Anti-caking agent
- Lubricant
- Carrier
- Coating agent
- Foaming agent
- Emulsifier
- Water-repellent

Oleochemical additives are part of our daily lives – but we are often not aware that these additives are essential auxiliaries used in the food, feed, Pharmaceutical and Cosmetic industry. Additives present in various additive classes and are free of impurities, such as dioxides, pesticides and heavy metals. Therefore our products are widely used in the following life science areas.

LIGAFOOD High Quality Additives for Food

Our products are manufactured according to HACCP food safety standards and comply with the FDA regulations for direct food contact (GRAS) and are certified within the latest Food Chemical Codex (FCC). In 2016, Peter Greven became the first Stearic producer to implement a Food Safety Management System and was awarded ISO 22000 at our plant in Geldermalsen. Due to our outstanding production setup, our products are qualified for food industry applications according to the 98/86/EC EG directive of the European parliament as registered in the following sections E 470a: sodium, potassium and calcium salts of fatty acids.

LIGAFOOD MF-2-V
This precipitated Magnesium Stearate (MF-2-V) is based on vegetable renewable raw materials and is very popular in the food industry due to its low particle size (average particle size D50: 7-11 µm) and its high specific surface area of 6-12 m²/g. It is used as a lubricant for tableting hard candies and dragees and as a forming agent in emulsifiable and baking powders. Furthermore LIGAFOOD MF-2-V improves the flowability and anti-caking effect in certain hydrophobic powdered foods (e.g. spices and herbs) to extend the shelf life of these products and materials. Due to its specific precipitated production process and the resulting high specific surface area, our LIGAFOOD MF-2-V is very efficient.

LIGAFOOD MF-2-K
This grade is characterised by the same unique properties as LIGAFOOD MF-2-V and is Kosher and Halal certified.

Palmastar MCST 325
Our direct processed Magnesium Stearate is manufactured from vegetable fatty acids and is used as a lubricant for tableting hard candies and dragees. It acts as a forming agent or emulsifier in cakes and baking powders to improve the specific precipitated production process, the quality of the food product and the shelf life of these products and materials.

LIGA CALCIUM STEARATE CPR-2-V
This grade is characterized by the same unique properties as LIGA CALCIUM STEARATE CPR-2-V and is Kosher and Halal certified.

LIGA SODIUM STEARATE FPC
Our Sodium Stearate is used as a forming agent, emulsifier and gelling agent and is indispensable in the food industry. It is used in chewing gum bases, in bakery's shortening and as an aid in the preparation of fat free and cream free corn syrups with a low dextrose content.

LIGA POTASSIUM STEARATE FPC
Our Potassium Stearate offers the same properties as our LIGA STEARATE FPC and is preferred as an alternative in formulations where a low sodium content is required.

Feed
Regulations in the feed industry are often as or more strict than that in the food industry. Additives that are used in the food industry must not only meet the food regulations but also need to comply with the feed regulations. These regulations are carefully observed by Peter Greven Nederland.

Calcium, Magnesium, Sodium and Potassium Stearates are registered as feed materials according directive (EU) No. 575/2011 and can be used as feed materials according directive (EC) No. 755/2004.

Key quality characteristics of our products in the feed industry:

- Anti-caking agent
- Flowability agent
- Carrier
- Coating agent
- Emulsifier
- Water-repellent

Following products are registered as feed materials according directive (EU) No. 575/2011 in section 13.06.4 as “Salts of fatty acids”:

- LIGA CALCIUM STEARATE CPR-2-V
- LIGA POTASSIUM STEARATE FPC
- PALMSTAR MGST 325

Our precipitated Calcium Stearate is used as a lubricant and carrier. Its hydrophobic properties improve stability and fluidity of animal feed. The product is also available as kosher and Halal certified quality.

LIGAFOOD MF-2-V
Our precipitated Magnesium Stearate is used as an anti-caking agent. Its hydrophobic properties improve stability and fluidity of animal feed. This product is also available as kosher and Halal certified quality.

LIGA SODIUM STEARATE FPC
Our LIGA SODIUM STEARATE FPC is an important ingredient used in many feed premixes for its coating and anti-caking properties with preserded blends and as an emulsifier and gelling agent in liquid blends.

LIGA POTASSIUM STEARATE FPC
Potassium Stearate offers the same properties as our LIGA SODIUM STEARATE FPC and is preferred as an alternative in formulations where a low sodium content is required.

Pharma
Oleochemical additives are among the most important and extensively used excipients in the pharmaceutical industry. Peter Greven began addressing these high quality requirements many years ago and dedicated one plant the production of pharmaceutical Stearates with vegetable origin. Our brand name LIGAMED® is dedicated to our high quality additives specifically developed for use in pharmaceutical applications. Information about our premium pharmaceutical Stearate product portfolio is listed in our LIGAMED® brochure. Supplementary to our high quality pharmaceutical product line LIGAMED® we also offer a standard Magnesium Stearate.

PALMSTAR MGST 325
Our direct processed Magnesium Stearate is manufactured from vegetable fatty acids and is used as a lubricant and anti-caking agent for manufacturing pharmaceutical, nutraceutical and dietary supplement tablets. PALMSTAR MGST 325 is manufactured in accordance to Ph. Eur and USP/NF grades.
Cosmetics

Soaps are the oldest, historically documented cosmetic products, e.g. in the cuneiforms of the Ancient Babylonians are references to formulations for the manufacture of soaps for body cleansing. Today surfactants have often taken over the function of soaps as a detergent. Nevertheless natural soaps and metallic soaps can be found in many cosmetic products.

The following products are manufactured using vegetable origin raw materials and are INCI listed and approved for the application in the cosmetic industry.

**LIGA ZINC STEARATE ZPR-2-V**
Our Zinc Stearate is used in the cosmetic industry as a colourant and anti-caking agent. It is mainly used in creams and ointments and in make-up - powders, mascaras, eye shadows - for its water repellent and protective agent characteristics. Furthermore zinc offers the advantage of exhibiting an antibacterial effect, especially in ointments.

**LIGASTAR AL DT/C-V**
This Aluminium Stearate grade is specifically developed for the production of creams and ointments. The product is characterized by its moderate gel strength at a relatively low gelling temperature of 80–120 °C. This results in very stable gels with good application properties. Typical usage depends on the base oil and varies between 1 % to 4 % of the formulation.

**LIGASTAR ALG-V**
LIGASTAR ALG-V is a Distearate produced with vegetable fatty acids and offering the best gelling properties in the range of all Aluminium Stearate grades. It is used in creams as a thixotropic agent and slightly modifies. It improves the feasibility and the adhesion to cosmetic powders and exhibits a slight astringent effect.

**LIGA SODIUM STEARATE FPC**
This Sodium Stearate grade is used as an emulsifier and opacifier in the cosmetic industry. However, the largest application is for the production of deodorant sticks: A solution of about 10 % of LIGA SODIUM STEARATE FPC forms a hard, solid gel under cold conditions: Its performance characteristics are due to its particle structure and composition ideally suitable for this application. The crystallization tendency of the gel can be prevented by the addition of Glycine or hexamethylene diamine (HMDA).

**LIGA POTASSIUM STEARATE FPC**
Our vegetable origin Potassium Stearate is used in the cosmetic industry mainly as an emulsifier, surfactant and cleansing agent.

**LIGA GLYZERIN 99,5 V PH.EUR**
Glycerine is known for its water retention properties and therefore offers a very beneficial influence on dry skin. This property is especially favoured and used in creams and lotions. Its sweet taste is a highly appreciated advantage when used in toothpastes. Furthermore Glycerine is used as a moisturizer and is characterized by its very low content of chlorides and heavy metals. The water content of LIGA GLYZERIN 99,5 V PH.EUR is especially gentle to the skin and complies with the requirements of the Ph.Eur, USP/NF and DAB.

**LIGA GLYZERIN 86 V PH.EUR**
This grade is characterized by the same unique properties as LIGA GLYZERIN 99,5 V PH.EUR with a glycerine content of 86 %. It therefore offers a lower viscosity that simplifies the handling and processing.
Cosmetics

Soaps are the oldest, historically documented cosmetic products, e.g. in the cuneiforms of the Ancient Babylonians are references to formulations for the manufacture of soaps for body cleansing. Today surfactants have often taken over the function of soaps as a detergent. Nevertheless, natural soaps and metallic soaps can be found in many cosmetic products.

The following products are manufactured using vegetable origin raw materials and are INCI listed and approved for the application in the cosmetic industry.

LIGA ZINC STEARATE ZPR-2-V
Our Zinc Stearate is used in the cosmetic industry as a co-solvent and anti-caking agent. It is mainly used in creams and ointments and in make-up products, mascaras, eye shadow, etc. for its water repellent and protective agent characteristics. Furthermore, zinc offers the advantage of exhibiting an antibacterial effect, especially in ointments.

LIGASTAR AL DT/C-V
This Aluminium Stearate grade is specifically developed for the production of creams and ointments. The product is characterised by its moderate gel strength at a relatively low gelling temperature of 80–100 °C. This results in very stable gels with good application properties. Typical usage depends on the base oil and varies between 1–4 % of the formulation.

LIGASTAR ALG-V
LIGASTAR ALG-V is a DeoCombi produced with vegetable fatty acids and offering the best gelling properties in the range of all Aluminium Stearate grades. It is used in creams as thixotropic agent and acts to stiffen the gels. It improves the flowability and the adherence to cosmetic powders and exhibits a slight antiseptic effect.

LIGA SODIUM STEARATE FPC
This Sodium Stearate grade is used as an emulsifier and opacifier in the cosmetic industry. However, the largest application for the production of deodorant sticks is a solution of about 10 % of LIGA SODIUM STEARATE FPC in a hard solid gel under cold conditions. Its performance characteristics are due to its particle structure and composition ideally suitable for this application. The crystallisation tendency of the gels can be prevented by the addition of Glycine or lecithinophosphate (LPC).

LIGA GLYZERIN 99,5 V PH.EUR
Glycerine is known for its water retention properties and therefore offers a very beneficial influence on dry skin. This property is especially favourable and used in creams and lotions. Its sweet taste is a highly appreciated advantage when used in toothpastes. Furthermore, Glycerine is used as a preservative and is characterised by its low level of impurities and heavy metals. The water content of Glycerine is 99,5 %, LIGA GLYZERIN 99,5 V PH.EUR is exclusively vegetable derived and complies with the requirements of the Ph.Eur, USP/NF, BP and DAB.

LIGA GLYZERIN 86 V PH.EUR
This grade is characterised by the same unique properties as LIGA GLYZERIN 99,5 V PH.EUR but with a glycerine content of 86 %. It therefore offers a lower viscosity that simplifies the handling and processing.