



The New Name in Vinyl Additives



A New Leader

Galata Chemicals, more than just a change in name

Galata Chemicals is a global provider of speciality chemicals and products that service the PVC and associated industries. Building on the company's valuable intellectual property and over 40 years operating experience, Galata Chemicals has the people, the products and the 'know how' to create optimised solutions that will add value to their customers' products and help them grow.



The information in this brochure is designed to provide a general overview of the wide range of products available from our European facility. Please refer to Galata's other brochures for additional information on products from our US facility and for product performance data classified by application. For more detailed product information and literature on specific applications and product groups, please contact Galata.

Trusted Brands

Galata offers a wide range of novel additive solutions. Product and technical innovation is core to the company strategy, driving the development of new additives for its traditional customer base and allowing expansion into new markets.

Building on the portfolio of trusted brands, new product development focuses on delivering greener and more sustainable solutions to the market. These include boosters to help optimise the cost/performance profile of heat stabilisers in PVC formulations; high performance, heavy-metal-free organic based stabilisers for flexible PVC applications; a new generation of octyl tin stabilisers; REACH* friendly liquid mixed metals for flexible and semi-rigid PVC applications; high performance epoxidised soybean oil plasticisers and new impact modifiers for PVC and engineering polymers.

*Registration, Evaluation & Authorisation of Chemicals



Galata Chemicals GmbH production site at Lampertheim, Germany

MANAGEMENT SYSTEM



Certified by DQS according to ISO 9001 and ISO 14001 (Reg.-Nr. 062442 QM/UM)

Production, sales and technical service around the globe

With a strong, global technical service and sales footprint, and principal production facilities in Lampertheim, Germany, and Taft, Louisiana, USA the company is backward integrated into the key intermediates for both its' tin and mixed metal stabilisers, allowing customers to benefit from a consistent, secure and reliable product supply partner.

The vinyl additives product range includes:

- Mark® Tin Heat Stabilisers
- Mark® Mixed Metal Heat Stabilisers
- Mark® OBS® Heavy-Metal-Free Stabilisers
- Mark® & Weston® Liquid Phosphite Esters
- Mark® Inhibitors
- Mark® Kickers and Boosters
- Marklube® Lubricants
- Drapex® Epoxidised Compounds
- Markstat® Antistatic Agents
- Blendex® and Royaltuf® Polymer Modifiers
- Actafoam® Chemical Foaming Agents

Typical PVC applications include:

- Rigid and flexible packaging
- Credit and smart cards
- Roofing, flooring and wall coverings
- Pool liners and geo-membranes
- Coated fabrics and tarpaulins
- Artificial leather
- Medical tubes and packaging
- Toys
- Flexible hoses
- Rigid pipes and pipe fittings
- Rigid profiles and wood composites
- Wire and cable

Heat Stabilisers

Mark® Octyltin Mercaptides

Octyl tin mercaptides impart excellent transparency and heat stability. In many countries they are approved for rigid, non-toxic food packaging materials. The selection of the stabiliser and the optimisation of the formulation depends on country specific approvals or on the single ingredients of the formulation.

Application Recommendation:

Rigid film: Mark® 17 MOK, Mark® 17 MOK-D, Mark® 17 MOK-N

Extruded rigid profiles: Mark® 17 MOK-P

Plastisols: Mark® T 216 GV

C-PVC extrusion: Mark® T 281, Mark® 17 MOK-A

Mark® Octyltin Carboxylate

T 682 is mainly used for rigid, non-toxic blown film which has to be odour free.

T 161 performs well to replace REACH regulated dibutyltin carboxylates

Mark® Octyltin Carboxylate and Mercaptide

These products are preferably recommended for the extrusion of rigid PVC sheets and profiles. They provide excellent light stability and weathering resistance.

General purposes outdoor profiles: Mark® T 652

Odour improved: Mark® T 650

Mark® Butyltin Mercaptides

Butyltin mercaptides are excellent heat stabilisers for technical applications. They have proved very satisfactory in PVC processing for many years. The selection depends on the characteristics of the finished article.

Application Recommendation:

Rigid foam: Mark® 17 M, Mark® T 22 M GV

High transparent applications: Mark® T 218 A, Mark® T 22 M GV, Mark® 17 M

C-PVC extrusion: Mark® T 218 A

Odour improved: Mark® T 22 M GV

Mark® Butyltin Carboxylate and Mercaptide

T 634 is preferably used for the extrusion of rigid PVC profiles and for injection moulding. T 634 provides excellent light stability and weathering resistance.

Mark® Octyltin Mercaptides

Product name	Supply form	Approval*
Mark® 17 MOK	L	EU/FDA
Mark® 17 MOK-A	L	EU/FDA
Mark® 17 MOK-D	L	EU/FDA
Mark® 17 MOK-N	L	EU/FDA
Mark® 17 MOK-P	L	
Mark® 17 MOK-S	L	EU/FDA
Mark® T 281	L	EU/FDA
Mark® T 216 GV	L	EU

Mark® Octyltin Carboxylate

Product name	Supply form	Approval*
Mark® T 682	L	EU
Mark® T 161	L	EU

Mark® Octyltin Carboxylate and Mercaptide

Product name	Supply form	Approval*
Mark® T 650	L	
Mark® T 652	L	

Mark® Butyltin Mercaptides

Product name	Supply form	Approval*
Mark® 17 M	L	
Mark® T 22 M	L	
Mark® T 22 M GV	L	
Mark® T 218 A	L	

Mark® Butyltin Carboxylate and Mercaptide

Product name	Supply form	Approval*
Mark® T 634	L	

Supply form: L - Liquid, P - Paste, S - Solid

Heat Stabilisers

Mark® Methyltin Stabiliser

Mark® 1984 E is used for extrusion, injection moulding and films if a high thermostability is required. Mark® 1995 provides excellent initial heat stability.

Mark® Calcium-Zinc Stabilisers

Galata provides a wide range of liquid, paste and solid calcium-zinc stabilisers. The products approved for indirect food contact are used in a large variety of plasticised and rigid articles. Some selected products are also recommended for use in medical applications.

Application Recommendation:

General use in rigid and flexible applications: Mark® CZ 122, Mark® CZ 122 E, Mark® CZ 123

Toys: Mark® CZ 122, Mark® CZ 108, Mark® CZ 116, Mark® CZ 116 E, Mark® CZ 118, Mark® CZ 118 E

Rigid calendering and injection moulding: Mark® CZ 2060, Mark® CZ 2026

Flexible injection moulding: Mark® CZ 97, Mark® CZ 402, Mark® CZ 405, Mark® CZ 408

Slush moulding and calendering: Mark® CZ 2039

Outdoor applications: Mark® CZ 142, Mark® CZ 402, Mark® CZ 405, Mark® CZ 408

Window profiles: Mark® CZ 2000

Flexible calendering: Mark® CZ 2051

Indoor profiles: Mark® CZ 2026

Automotive flexible calendering: Mark® CZ 2026, Mark® CZ 2039

Automotive slush moulding: Mark® CZ 2039

Medical applications: Mark® CZ 11, Mark® CZ 11 G

Flooring top coat: Mark® CZ 449

Mark® Methyltin Stabiliser

Product name	Supply form	Approval*
Mark® 1984 E	L	EU/FDA
Mark® 1995	L	EU/FDA

Mark® Calcium-Zinc Stabilisers

Product name	Supply form	Approval*
Mark® CZ 11†	P	EU/FDA
Mark® CZ 11 G	S	EU/FDA
Mark® CZ 97	S	EU/FDA
Mark® CZ 108	L	EU/FDA
Mark® CZ 113†	P	EU/FDA
Mark® CZ 116	L	EU††
Mark® CZ 116 E	L	EU/FDA
Mark® CZ 118 E	L	EU/FDA
Mark® CZ 122 E	P	EU/FDA
Mark® CZ 142	L	
Mark® CZ 402	L	
Mark® CZ 405	L	
Mark® CZ 408	L	
Mark® CZ 449	L	
Mark® CZ 2000	S	
Mark® CZ 2026	S	EU
Mark® CZ 2051	S	EU/FDA
Mark® CZ 2060	S	

† Product also available with vegetable stearates

†† National regulations have to be considered



* The approvals listed in this brochure (EU/FDA) only provide an overview and may not be valid for the specific application or respective product. Please contact Galata for assistance.

Heat Stabilisers

Mark® Epoxy-Zinc Stabiliser

Mark® EZ 781 is used for automotive plastisol applications requesting low fogging, low odour and good long term heat stability at 120°C.



Mark® Epoxy-Zinc Stabiliser

Product name	Supply form	Approval*
Mark® EZ 781	L	



Mark® Barium-Zinc Stabilisers

In addition to classical barium-zinc stabilisers (BZ 800 series) Galata offers low phenol and phenol free products (BZ 900 series).

Application Recommendation:

General purpose use in plastisol processing: Mark® BZ 805, Mark® BZ 812, Mark® BZ 813, Mark® BZ 830, Mark® BZ 861

Phenol-free products for semi-rigid and flexible applications: Mark® BZ 905, Mark® BZ 912, Mark® BZ 913, Mark® BZ 961, Mark® BZ 965, Mark® B 991

General purpose for flexible and semi-rigid applications: Mark® BZ 861, Mark® BZ 865, Mark® BZ 891

High transparency: Mark® BZ 855, Mark® BZ 955

Roofing: Mark® BZ 882

Mark® Barium-Zinc Stabilisers

Product name	Supply form	Approval*
Mark® BZ 805	L	
Mark® BZ 812	L	
Mark® BZ 813	L	
Mark® BZ 830	L	
Mark® BZ 855	L	
Mark® BZ 861	L	
Mark® BZ 865	L	
Mark® BZ 882	L	
Mark® BZ 891	L	
Mark® BZ 905	L	
Mark® BZ 912	L	
Mark® BZ 913	L	
Mark® BZ 955	L	
Mark® BZ 961	L	
Mark® BZ 965	L	
Mark® BZ 991	L	

Supply form: L - Liquid, P - Paste, S - Solid

Heat Stabilisers

Mark® Zinc Stabilisers

Galata's zinc stabilisers are developed especially for applications requiring low phenol, odour free and long term heat stability. They are recommended for pigmented, calendered films and plastisols for the automotive industry.

Mark® OBS® Organic Based Stabilisers

For flexible PVC applications only. Mark® organic based heat stabilisers are heavy-metal-free systems, designed according to Galata's commitments for sustainable developments and Responsible Care®. They are free of odour and provide low fogging and low VOC's. Mark® OBS® systems feature excellent initial colour, long term heat stability and transparency.

Application Recommendation:

Wall covering, flooring: Mark® OBS® 1100, Mark® OBS® 1200, Mark® OBS® 2405 in combination with Mark® CE 325

Automotive (plastisol): Mark® OBS® 1200, Mark® OBS® 2405

Flooring (plastisol): Mark® OBS® 2302, Mark® OBS® 2305 or Mark® OBS® 2405 in combination with Mark® CE 325

Clear application (plastisol, extrusion, calendering):

Mark® OBS® 2405

Mark® Zinc Stabilisers

Product name	Supply form	Approval*
Mark® Z 2020	S	EU/FDA
Mark® Z 2032 PF	P	

Mark® OBS® Organic Based Stabilisers

Product name	Supply form	Approval*
Mark® OBS® 1100	L	
Mark® OBS® 1200	L	
Mark® OBS® 2302	L	
Mark® OBS® 2305	L	
Mark® OBS® 2405	L	



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Co-Stabilisers & Additives

Drapex® Epoxidised Compounds

Epoxy plasticisers are effective as co-stabilisers in nearly all systems. They are used to obtain a good weathering stability with BaZn or CaZn stabilisers.

Application Recommendation:

General purposes: Drapex® 39

Outdoor improved: Drapex® 392 S

Low fogging for automotive applications: Drapex® 391

Low viscosity: Drapex® 4.4

Mark® Boosters

These co-stabilisers improve the long term heat stability, colour hold or the amine resistance of metal soap and tin stabilisers depending on the grade used.

Mark® and Weston® Phosphites

The addition of phosphite co-stabilisers improves the heat stability, weathering stability and transparency to formulations using metal soap stabilisers (BaZn, CaZn or Zn). When tin mercaptides are used as stabilisers in calendaring a better melt viscosity is obtained.

Application Recommendation:

Phenol-free: Mark® CH 55, Mark® CH 302, Weston® 439, Weston® TLP

Low phenol, nonylphenol free: Mark® CH 304, Mark® CH 305

Markstat® Antistatic Agents

Surface static electricity of plastic products often results in difficulties after processing and in the use of finished goods. Antistatic agents prevent such surface electricity and diminish it by reducing the surface resistivity.

Application Recommendation:

Plasticised applications: Markstat® 51, Markstat® 60, Markstat® 88

Rigid applications: Markstat® 88

Improved heat stability: Markstat® 88

Drapex® Epoxidised Compounds

Product name	Supply form	Approval*
Drapex® 39	L	EU/FDA
Drapex® 391	L	EU/FDA
Drapex® 392	L	EU/FDA
Drapex® 392 S	L	EU/FDA
Drapex® 4.4	L	

Mark® Boosters

Product name	Supply form	Approval*
Mark® CE 325	L	
Mark® CE 345	S	EU
Mark® CE 350	L	
Mark® CE 387	S	EU
Mark® CE 583	S	EU/FDA

Mark® and Weston® Phosphites

Product name	Supply form	Approval*
Mark® CH 55	L	EU/FDA
Mark® CH 66	L	
Mark® CH 300	L	
Mark® CH 301	L	
Mark® CH 302	L	
Mark® CH 304	L	
Mark® CH 305	L	
Mark® TNPP	L	EU/FDA
Weston® 439	L	FDA
Weston® TLP	L	FDA

Markstat® Antistatic Agents

Product name	Supply form	Approval*
Markstat® 51	L	
Markstat® 60	L	
Markstat® 88	L	
Markstat® AL 14	L	FDA

Supply form: L - Liquid, P - Paste, S - Solid

Co-Stabilisers & Additives



Mark® Inhibitor

Mark® I 489 is used in printing inks/lacquers for the inhibition process to suppress the formation of foam locally.

Mark® Kickers

Kickers catalyse the decomposition of the blowing agents at lower temperatures.

2-EHA free: Mark® K 902, Mark® K 904

Marklube® Lubricants

The rheological properties and the tendency of PVC melts to adhere to the metal parts of processing equipment may be influenced by the addition of lubricants.

Amide wax: Marklube® 280

Paraffin oil: Marklube® 366

Partially oxidised PE-wax: Marklube® 373

Mark® Inhibitor

Product name	Supply form	Approval*
Mark® I 489	L	

Mark® Kickers

Product name	Supply form	Approval*
Mark® K 102	L	
Mark® K 104	L	EU ^{††}
Mark® K 902	L	
Mark® K 904	L	

^{††} National regulations have to be considered

Marklube® Lubricants

Product name	Supply form	Approval*
Marklube® 280	S	EU/FDA
Marklube® 366	L	EU/FDA
Marklube® 373	S	EU/FDA

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Modifiers & Processing Aids

Blendex® Impact Modifiers

ABS impact modifiers in powder form are used mostly in rigid and semi-rigid PVC applications when low temperature impact and chemical resistance is required.

Application Recommendation:

PVC: Blendex® 3160, Blendex® 338

C-PVC: Blendex® 3160, Blendex® 338

Royaltuf® Impact Modifiers

ASA or AES impact modifiers in powder form are used when colour and impact stability under UV aging and weathering are required.

Blendex® Vicat Modifiers

AMSAN based modifiers in powder form are used for PVC Vicat softening point increase. Blendex® 703 also increases the impact resistance.

Blendex® Impact Modifiers

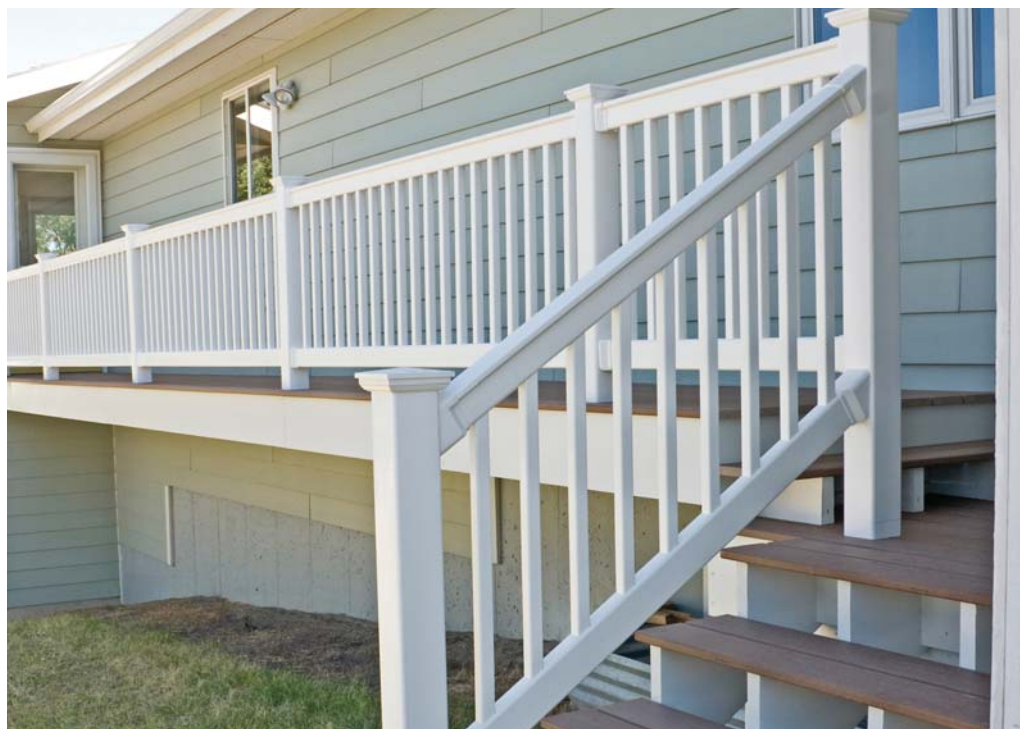
Product name	Supply form	Approval*
Blendex® 338	S	EU/FDA
Blendex® 3160	S	FDA

Royaltuf® Impact Modifiers

Product name	Supply form	Approval*
Royaltuf® 945 A	S	
Royaltuf® 960 A	S	

Blendex® Vicat Modifiers

Product name	Supply form	Approval*
Blendex® 587 S	S	
Blendex® 703	S	



Supply form: L - Liquid, P - Paste, S - Solid

Modifiers & Processing Aids

Blendex® Processing Aids

SAN based processing aids provide good chemical resistance, excellent cell structure and melt strength. Blendex® 866 is recommended for clear PVC applications while B869 can be used in PVC, ABS or PC.

Application Recommendation:

Rigid blow moulding: Blendex® 866

Rigid foam: Blendex® 869

Blendex® Special PVC Modifiers

B5215 and B5233 - SAN based modifiers are excellent carrier resins and can be used in PVC to quicken fusion with minimal die swell.

Application Recommendation:

Low gloss extrusion and injection moulding: Blendex® BMAT

Actafoam® Chemical Foaming Agents

Actafoam® chemical foaming agents are used in a broad range of polymers processed between 250 - 450°F (121 - 232°C). Typical polymers include plasticized and rigid PVC, rubber, polyolefins, styrenics, thermoplastic elastomers and ABS. Products are generally selected on the basis of foaming temperature and polymer compatibility.

Application Recommendation:

Low temperatures, LDPE, plastisols, rubber: Actafoam® OT

General purpose PVC: Actafoam® AZ-130

Pre-activated: Actafoam® 780, Actafoam® 765-A, Actafoam® 754-A

Rigid PVC extrusion, injection moulding: Actafoam® AZRV, Actafoam® AZ-760-A



Blendex® Processing Aids

Product name	Supply form	Approval*
Blendex® 866	S	FDA
Blendex® 869	S	FDA

Blendex® Special PVC Modifiers

Product name	Supply form	Approval*
Blendex® BMAT	S	EU
Blendex® 5215	S	
Blendex® 5233	S	FDA

Actafoam® Chemical Foaming Agents

Product name	Supply form	Approval*
Actafoam® OT	S	FDA
Actafoam® 780	S	
Actafoam® 765-A	S	
Actafoam® 754-A	S	
Actafoam® AZRV	S	FDA
Actafoam® AZ-760-A	S	FDA
Actafoam® AZ-130	S	FDA

+ Please be advised that Blendex® modifiers shown with FDA status are in chemical compliance with 21 Code of Federal Regulations Section 181.32 (acrylonitrile copolymers and resins) for use in repeated-use food-contact applications subject to the limitations of this regulation and any other applicable regulations. It is, however, the responsibility of the final manufacturer to determine that the finished food-contact article meets the limitations for Acrylonitrile monomer extraction as set forth in 21 CFR 181.32(b) of the Food Additive Regulations.

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