



Plastisol



we add character to plastics

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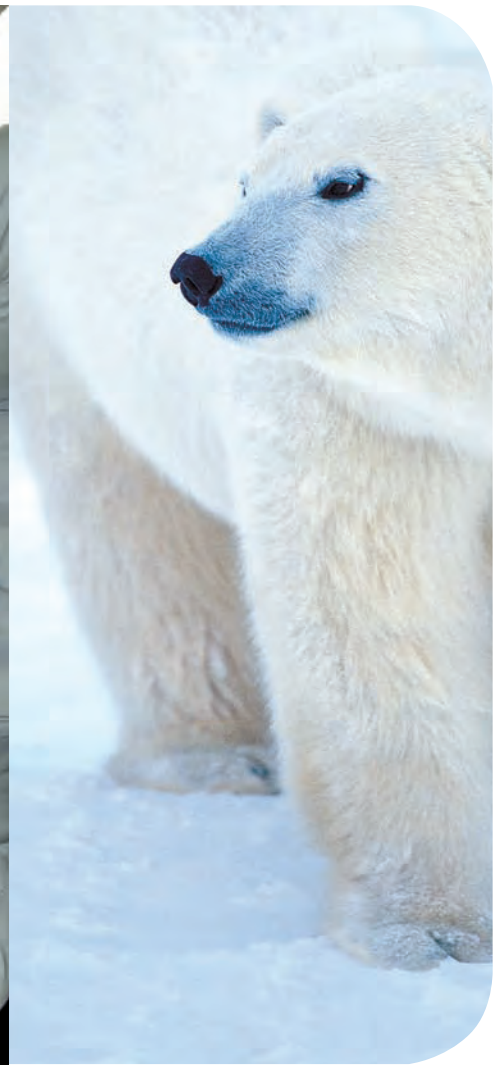
Plastics open new avenues for the future. Additives essentially determine properties and quality of the end product.

For more than 50 years, Baerlocher, a global leader in supplying additives has been successfully providing support to the plastics industry by developing and manufacturing high-quality plastics additives.

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Baerostab	Ceasit
Baeropol	Zincum
Baerolub	



Thirteen production sites in Germany, Great Britain, Italy, France, the United States, Malaysia, India, Korea, Brazil, Peru and Argentina as well as a sales network covering more than 40 countries make the Baerlocher group of companies a strong partner. This global presence and more than 1200 employees worldwide make sure that we are always close to the customer. Future-oriented, we are continuously investing in research and development. A large number of in-house research scientists and technical experts ensure our considerable creative potential and innovative power. Baerlocher has R+D facilities in Germany (München-Unterschleissheim), France (Marseille), Italy (Lodi) and the United States (Dover, Ohio).

Environmentally sound production processes as well as the safety and protection of people and environment are key corporate goals. As a globally active group of companies we are aware of our responsibility, regardless of time or place. We are committed to the principles of "Responsible Care": Our quality management is certified to ISO 9001 and our environmental management system to ISO 14001, encouraging our employees to work together in a responsible way. This policy will not least benefit our customers.

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<p>1 Germany Baerlocher GmbH Lingen</p>	<ul style="list-style-type: none"> · Solid Ca-based stabilisers · Pb stabilisers and one-packs 	<ul style="list-style-type: none"> · Stearates · Baeropols · Fatty Acids
<p>2/3 Italy Baerlocher Italy S.p.A. SO.G.I.S. S.p.A. Lodi and Cremona</p>	<ul style="list-style-type: none"> · Solid Ca-based stabilisers · Sn stabilisers · Liquid Mixed Metal stabilisers 	<ul style="list-style-type: none"> · Lubricants · Stearates · Fatty Acids
<p>4 United Kingdom Baerlocher UK Ltd. Bury</p>	<ul style="list-style-type: none"> · Solid Ca-based stabilisers · Pb one-packs 	
<p>5 France Baerlocher France SAS Marseille</p>	<ul style="list-style-type: none"> · Solid Sn-based one-packs · Lubricants · Waxes 	





6	Malaysia Baerlocher (M) Sdn Bhd Seremban	<ul style="list-style-type: none"> · Solid Ca-based stabilisers · Pb stabilisers and one-packs 	<ul style="list-style-type: none"> · Stearates · Baeropols
7	India Baerlocher India Additives Pvt. Ltd. Dewas	<ul style="list-style-type: none"> · Solid Ca-based stabilisers · Pb stabilisers and one-packs 	<ul style="list-style-type: none"> · Liquid Mixed Metal stabilisers
8	Korea DOOBON Fine Chemical Co., LTD Chungchong	<ul style="list-style-type: none"> · Stearates · Baeropol 	
9/10	USA Baerlocher Production USA LLC Baerlocher USA LLC Cincinnati and Dover	<ul style="list-style-type: none"> · Solid Ca-based stabilisers · Liquid Mixed Metal stabilisers 	<ul style="list-style-type: none"> · Stearates · Baeropols
11	Peru Compania Quimica SA Lima	<ul style="list-style-type: none"> · Solid Ca-based stabilisers · Pb stabilisers and one-packs 	<ul style="list-style-type: none"> · Liquid Mixed Metal stabilisers · Plasticiser
12	Brazil Baerlocher do Brasil SA Americana	<ul style="list-style-type: none"> · Solid Ca-based stabilisers · Pb one-packs · Liquid Mixed Metal stabilisers 	<ul style="list-style-type: none"> · Stearates · Baeropols
13	Argentina Lestar Quimica SA Junin (Buenos Aires)	<ul style="list-style-type: none"> · Solid Ca-based stabilisers · Pb one-packs · ESBO 	<ul style="list-style-type: none"> · Phosphites · Stearates · Baeropols





Baerlocher PVC Additives

- **high-performance**
- **tailor-made**
- **quality-controlled**
- **future-orientated**
- **cost-efficient**

Contents

2	Additives for the processing of PVC plastisol
6	Applications
6	Carpet backing and closures
7	Flooring
12	Artificial leather
13	Stabilisers for automotive use
14	Wall coverings
15	Stabilisers for outdoor applications, coated textiles, roofing and coil coating
16	Car underbody sealants and seam sealers
16	Dip coating
17	Rotational moulding
18	Conveyor and processing belts
19	Product groups
19	Stabilisers
20	Kickers
21	Other additives for the processing of plastisol

Additives for the Processing of PVC Plastisol

Plastisols are dispersions of paste PVC resins in plasticiser. Being liquid, plastisols allow pressureless moulding at room temperature. Plastisols fuse or gel when heated and turn into a homogenous melt at about 150 – 210 °C. Liquid BaZn, CaZn stabilisers, pastes and modern solid CaZn stabilisers are widely used for plastisol processing. Contrary to other PVC processing methods, the required amount of stabiliser is relatively small. Lubricants are normally not used for processing, e.g. release agents can be applied directly to the mould instead of being incorporated into the plastisol. If necessary, both heat and light stability of mixed metal stabilisers can be enhanced by adding epoxidised soya bean oil (ESBO) like Baerostab LSA or epoxidised fatty acid ester like Baerostab LSU. Low tox, low odour and low volatile stabiliser systems have become more and more common in plastisol applications, e.g. in flooring, wall coverings, toys, car interiors, etc. ...

Baerlocher stabilisers for plastisols are developed under respect of REACH regarding the safety and protection of people and environment.

When choosing a stabiliser, the requirements of the final product need to be specified in detail in order to adjust both the performance and the price-effectiveness of the stabiliser.

The requirements a stabiliser must comply with:

- application
- processing and specific necessities
- the performance required of the final product
- the legal requirements during manufacturing and use of the final product.



Plastisol products (unsupported or supported) include the following:

- artificial leather (compact, expanded, compact-expanded)
- automotive artificial leather (compact, expanded, compact-expanded)
- car underbody sealants and seam sealers (compact)
- carpet backing and heavy weight coatings (compact, expanded)
- conveyor belts (compact, single-layers, multi-layers)
- dipped goods and dip coatings (compact, e.g. tool handholds, bar ends)
- dolls, balls, toy animals, anatomic models for education, etc. (compact)
- floorings (compact, expanded, compact-expanded)
- wall coverings (compact, expanded, compact-expanded)
- coated textiles, tarpaulins, tents, coil coatings (compact)
- roofing membranes (compact)
- sealants for closures (compact, expanded)
- gloves, boots (compact)

The most important properties which are influenced by the stabiliser include:

Stabiliser	Processing	Finished product
Efficiency	Static heat stability	Haptic / Surface / Gloss / Colour / Odour
Compatibility with ESBO	Dynamic heat stability	Transparency / Whiteness
Compatibility with plasticiser	Fusion	Conformity to regulations / standards
Compatibility with bonding agents	Adhesion	Toxicity / non tox approval
Colour	Mould release	Residual heat stability
Emission / VOC	Plate-out during embossing	Light fastness / UV resistance
Flashpoint	Condensation	Weather resistance
Odour	Paste deaeration	Heat ageing resistance
Handling behaviour	Paste viscosity	Amine resistance
Storage stability	Paste ageing	Fogging / Emissions / VOC
Ingredients		Migration behaviour
		Printability
		Weldability
		Adhesive compatibility
		Blocking behaviour

Important notice

Non-tox products: A group of stabilisers composed of those components approved by the different regulations as substances in PVC intended to come into contact with foodstuffs. For detailed pieces of information please contact one of Baerlocher's representatives.

Dependent on the final use goods could be produced in compact and expanded form or in many combinations. Expanded goods are either produced by mechanical foam (dispersion of small air bubbles like whipped cream) or by chemical process (decomposition of added blowing agent).

Azodicarbonamide (ADC) is the blowing agent with highest importance. For food contact applications (e.g. crown caps) ADC is no longer admitted and replaced by sodium-hydrogen-carbonate in combination with a non-tox stabiliser.

So called kickers reduce the high decomposition temperature of ADC to approx. 150°C to 200°C. Kickers also have a stabilising effect.

Most widely-used kickers are potassium-zinc (K/Zn) and barium-zinc (Ba/Zn). Kickers based on low odour and low volatile solvents with a flash point higher 100°C are favoured.

For plastisol processing following techniques are used :

- Spread coating
- Screen printing
- Casting
- Dipping
- Spraying

During spread coating the plastisol is applied to textiles, fabrics, mats, metal belts, papers or release papers by a knife, a roller or a brush, followed by gelling or pre-gelling when further coatings will be applied. Gelling and pre-gelling could be made by drum or by oven.

Casting technology include 3 different possibilities:

A. casting of solid parts

B. slush moulding of half-open parts (e.g. crash pads for automotive applications) and

C. rotational moulding for the manufacture of closed hollow bodies (e.g. balls, dolls, toys, anatomic models)

There are two different ways of dip coating: hot dipping (the moulds or metal parts are heated before dipping) and cold dipping (the moulds or metal parts are cold or slightly pre-heated when dipped into the plastisol). With hot dipping coating thickness is determined by temperature of the dipped part and the dipping time in the plastisol, which has usually a low viscosity and very good ageing behaviour. With cold dipping viscosity and rheological behaviour are the most important factors.

During spraying process the PVC mass is applied by a nozzles to metal surfaces under high pressure. The sprayed product will be gelled by moving to an oven.

Applications

Stabilisers for carpet backing

With this application based on paste-making PVC copolymers (approx. 5 % acetate) special types of azodicarbonamide are used which contain some activators for reduction of the decomposition temperature.

For increasing activation kickers are suitable due to their high zinc content.

For compact backing or heavy-weight coatings the same CaZn stabilisers are recommended as used for basecoat of CV flooring (cf. p. 10).

Baerostab	Form	Type	Characteristics
L 233	L	Zn	Standard zinc octoate with 23 % zinc, fast kicker, very viscose liquid
L 144-100	L	Zn	Standard octoate free zinc kicker, solvent with high flash point
KK 48	L	KZn	High performance, fast kicker, outstanding early colour
KK 430	L	KZn	Standard, fast kicker, good heat stability
CT 680 X RF	L	MgZn	Standard, good colour properties, phosphite free, nonylphenol free, ptBBA free
CT 682 X RF	L	MgZn	Standard, phosphite free, 2-EHA free, nonylphenol free, ptBBA free,

L = liquid

Stabilisers for closures

Sealing compounds for closures must display special organoleptic properties (no influence on taste and colour of foodstuff). The following products have been found to yield satisfactory results:

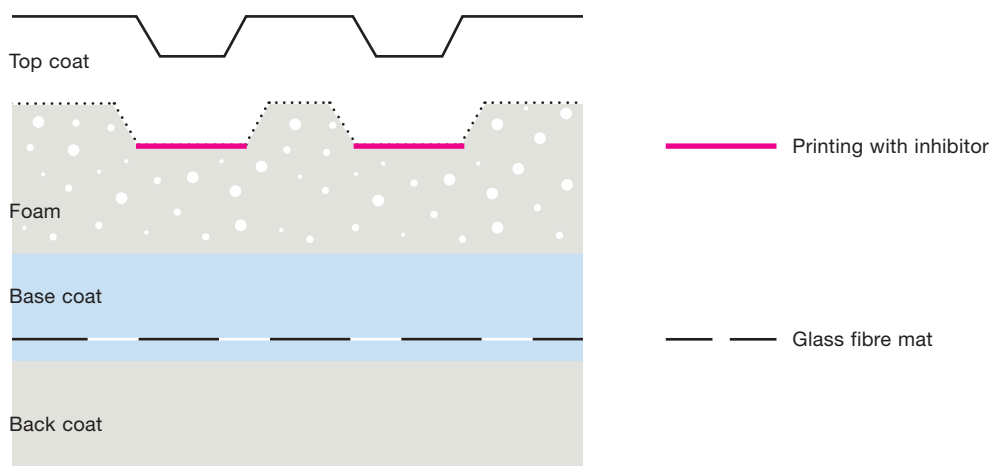
Baerostab	Form	Type	Characteristics
Zincum 5 Zincum T	P	Zn	Standard, non-tox, solid kicker with stabilising effect, phosphite free, 2-EHA free,
Zinkcaprilat SW	P	Zn	Standard plus, non-tox, solid kicker with stabilising effect, phosphite free, 2-EHA free, higher Zn content as Zincum series
NT 1 S NT 170 P	P	CaZn	Standard, non-tox, solid stabiliser with kicking effect, phosphite free, 2-EHA free
NT 164 PS	PS	CaZn	Standard, non-tox, stabiliser in paste form, phosphite free, 2-EHA free, cost efficient
NT 170 PS	PS	CaZn	Standard, non-tox, stabiliser in paste form, phosphite free, 2-EHA free, good heat stability
NT 324-1 P	P	Zn	Standard, non-tox, solid stabiliser, 2-EHA free, in combination with food-approved foaming agent Baerocel NT 2005

PS = paste; P = powder

Stabilisers for flooring

Floorings manufactured by plastisol processing are heterogeneous (combination of PVC with other materials, e.g. glassfibre mat), mainly Cushion Vinyls (CV).

CV flooring



As shown above, CV flooring normally consists of 6 layers (from top to bottom):

1. the topcoat or wear layer (provides the wearing properties),
2. the printing, normally up to 6 colours, partly with inhibitor containing printing ink,
3. the foamcoat which will be chemically inhibited,
4. the basecoat (or impregnation coat) for closing the open glassfibre mat and for achieving an absolutely smooth surface for the following coating,
5. the glassfibre mat and
6. the backing.

Topcoat

The topcoat is the last spread coating in the manufacture of the upper side of the flooring.

After applying the topcoat the flooring is finally gelled and expanded in an oven. This step mainly determines the speed of the total line, assuming that the total process is continuous.

The stabiliser of the topcoat must meet quite a number of demanding requirements. Not only does the stabiliser impart the heat stability required for processing, it also influences colour, transparency, brilliancy, light stability, dark yellowing, stain resistance, PU lacquering and the decomposition of the blowing agent in the foam coat close to the border-line foam coat/top-coat.

Other important requirements are very low volatility, low odour and low phenol content. The following stabilisers are recommended:

Baerostab	Form	Type	Characteristics
CT 9183 X RF	L	CaZn	Standard, low phenol, 2-EHA free, nonylphenol free, ptBBA free, low odour
CT 9169 X RF	L	CaZn	Standard plus, low phenol, 2-EHA free, nonylphenol free, ptBBA free
UBZ 613-1 X RF	L	BaZn	Standard plus, low phenol, low odour, 2-EHA free, nonylphenol free, ptBBA free, designed for "gelling drum" processing,
UBZ 614 X RF	L	BaZn	Standard plus, low phenol, low odour, 2-EHA free, nonylphenol free, ptBBA free, designed for "gelling drum" processing,
CT 143-1 PS	PS	CaZn	Standard plus, low odour, phenol free, 2-EHA free, nonylphenol free, ptBBA free, designed for "gelling drum" processing, Paste based on DIDP, dosage between 3,0 and 5,0 phr
CT 343-1 P	S	CaZn	Standard plus, low odour, phenol free, 2-EHA free, nonylphenol free, ptBBA free, designed for "gelling drum" processing, Dosage between 1,0 and 1,5 phr
CT 1181 P	S	CaZn	Standard plus, low odour, phenol free, 2-EHA free, nonylphenol free, ptBBA free, Dosage between 1,0 and 2,0 phr

L = liquid; PS = paste; S = solid

Printing

After pregelling the foam coat is printed. For an excellent printing quality the surface of the foam coat must be absolutely smooth. Some of the printing inks contain a so-called inhibitor (usually benzotriazole and its derivatives) which delays or prevents expansion of the foam coat when applied to specific areas. During later expansion this method produces flooring with a relief structure according to the printed design and is known as chemical embossing.

Foamcoat

Normally ZnO is used as kicker in the foam coat. If required, the activation of the blowing agent can be modified by addition of further kickers like Baerostab KK 430 or KK 47 S (see also back coating). For the pregelling of the foam coat a low temperature (about 150 °C) is used so that no decomposition of the blowing agent can occur (even a very small decomposition leads subsequently to irregular cell structure with eventually big bubbles).

Basecoat

The surface quality of the pre-gelled basecoat is responsible for the smoothness and uniform thickness of the applied foam coat and therefore also affects the quality of the later printing. To achieve an absolutely smooth and closed (porous-free) surface the basecoat is gelled in contact with a heated metal surface (heated drum). During spreading onto the open glass fibre mat the plastisol penetrates more or less into the mat (impregnation of the mat). The degree of penetration is fixed by the type of glass fibre mat, the plastisol rheology, the kind of spreading and the line speed. Normally, relatively highly filled plastisols (or mechanical foams) are applied. For the heat stabilisation inexpensive stabilisers are sufficient except in cases where additional requirements of the finished product demand special stabilisers like low emission, low phenol content and low odour products. The normal dosage is about 1 phr.

Baerostab	Form	Type	Characteristics
CT 682 X RF	L	MgZn	Standard, low odour, phosphite free, phenol free, nonylphenol free, ptBBA free, 2-EHA free
NT 583 P	P	CaZn	Standard plus, low odour, phosphite free, phenol free, nonylphenol free, ptBBA free, 2-EHA free, designed for "gelling drum" processing
UBZ 614 X RF	L	BaZn	Standard plus, low odour, low phenol, nonylphenol free, ptBBA free, 2-EHA free, designed for "gelling drum" processing

L = liquid; P = solid/powder

Glass fibre mat

The glass fibre mats used are in the weight range of approx. 40 – 60 g/m² with a thickness of about 0.4 mm. Despite the low weight and the low mechanical properties, the mat is strong enough for direct spreading and imparts the required dimensional stability to the finished flooring.

Back coat (backing)

The backing can be done in a separate process or – with continuous process – in line after turning of the expanded product. The gelling temperatures for the backing are below those for previous expansion in order to avoid after-blowing of the inhibited foam coat and to protect the downwards turned surface of the flooring from damage.

The back coating includes three alternatives:

1. compact
2. chemical foam
3. mechanical foam

Compact backing

The formulations used are very similar to those used for the basecoat. Accordingly the same stabilisers are applied.

Chemical foam backing

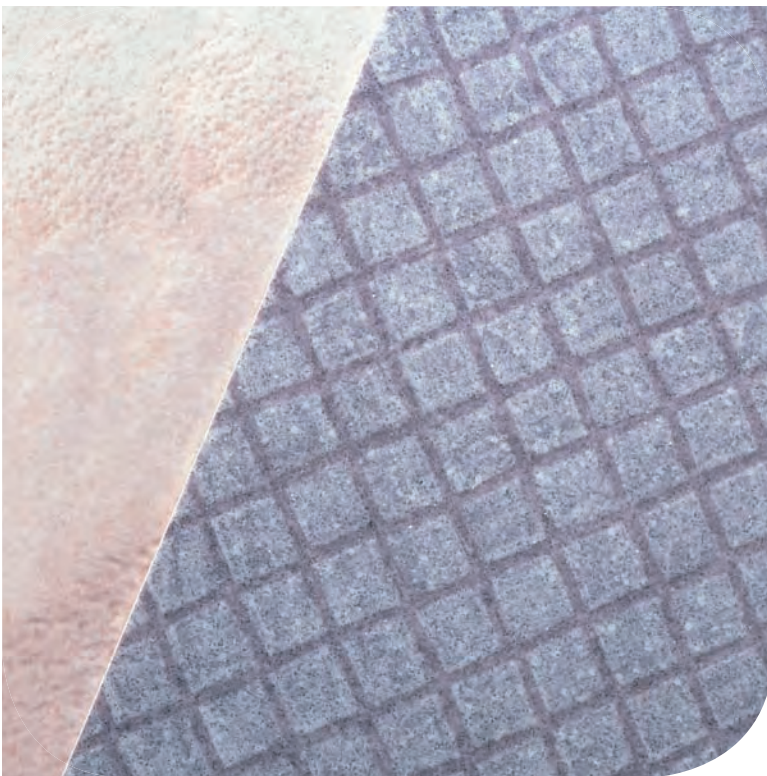
Due to the relatively low temperatures for expansion only very fast kickers are used in combination with fast expandable PVC resins or with PVC copolymers (approx. 5 % acetate).

Baerostab	Form	Type	Characteristics
KK 42	L	KZn	Standard, fast all-round kicker
KK 42-4	L	KZn	Standard, fast all-round kicker, 2-EHA free
KK 430	L	KZn	Standard, fast kicker, good heat stability

L = liquid

Mechanical foam backing

The preparation of the mechanical foam is done by means of special high speed foam mixers by incorporation of air into the plastisol. To prevent the foam from collapsing during further processing (spreading, gelation) it is stabilised by some kind of emulsifier. These foam stabilisers can be based on soaps or silicones. Normally silicones are preferred because they impart some water repellent properties to the foam and produce more open-cell foams. Additionally, the choice of PVC resins is easier. For heat stability the same stabilisers are used as for the basecoat (if there are no special requirements).



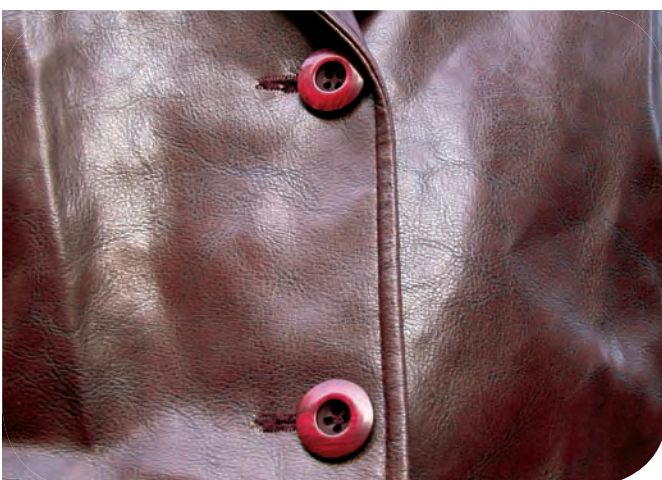
Stabilisers for artificial leather

The product range of artificial leathers is almost unlimited. The large number of possible products, beginning with compact unsupported and ending with compact-expanded-textile supported for various requirements or applications (bags, upholstery, clothing, suitcases, shoes, table cloth, etc.), is additionally complicated by variations in processing. All these different possibilities result in different requirements and therefore affecting the choice of stabiliser and kicker.

Compact artificial leather and topcoats

Baerostab	Form	Type	Characteristics
UBZ 660-1 RF	L	BaZn	Standard, nonylphenol free, ptBBA free
UBZ 711-1 X RF	L	BaZn	Standard plus, low phenol, 2-EHA free,
CT 682 X RF	L	MgZn	Standard, phosphite free, 2-EHA free, nonylphenol free, ptBBA free, low odour
CT 680 X RF	L	MgZn	Standard, good colour properties, phosphite free, nonylphenol free, ptBBA free

L = liquid



**Close to the reality -
artificial leather**

Kicker for artificial leather

Baerostab	Form	Type	Characteristics
KK 40	L	BaZn	Standard, fast all-round kicker,
KK 42	L	KZn	Standard, fast all-round kicker,
KK 42-4	L	KZn	Standard, fast all-round kicker, 2-EHA free
KK 48	L	KZn	High performance, very fast kicker, excellent early colour
KK 430	L	KZn	Standard, fast kicker, good heat stability

L = liquid

Stabilisers for artificial leather / automotive use

The requirements on the raw materials for products for car interiors have been increased dramatically in the last years. The specifications range from more stringent fogging demands to heat ageing resistance in the temperature range of 130 °C and perfect vacuum forming of unsupported expanded artificial leather. A further requirement is the colour resistance in contact with PUR foam.

Co-stabilisers like Baerostab ASM 711 and ASM 715 normally used in combination with basic stabilisers.

Baerostab	Form	Type	Characteristics
UBZ 711-1 X RF	L	BaZn	Standard plus, low phenol, nonylphenol free, ptBBA free, 2-EHA free,
ZE 603	L	Epoxy	Standard plus, epoxy based, metal free, phenol free, nonylphenol free, ptBBA free, 2-EHA free, Bisphenol A free
NT 580 A	P	CaZn	Standard plus, phenol free, nonylphenol free, 2-EHA free, ptBBA free, Bisphenol A free, low fogging, low odour
CT 181 PS	PS	CaZn	Standard plus, phenol free, nonylphenol free, 2-EHA free, ptBBA free, Bisphenol A free, low fogging, low odour, Paste based on DIDP
NT 319 P MC 8763-1 CP	P	CaZn	Standard plus, phenol free, nonylphenol free, 2-EHA free, ptBBA free, Bisphenol A free, low fogging, low odour, low water uptake,
ASM 711ASM 715	P	Co-stabiliser	Co-stabilisers in combination with BaZn and CaZn for improvement of heat ageing resistance in the temperature range of 120 °C to 150 °C and amine resistance when plastisol comes in contact with PUR foam.
CT 148 PS	PS	Ca	Standard plus, phenol free, nonylphenol free, 2-EHA free, ptBBA free, Bisphenol A free, low fogging, low odour, Pasted perchlorate based on linear phthalate

L = liquid; PS = paste; P = powder

Kickers and stabilisers for vinyl wall coverings

High speed processing for wall covering manufacturing requires kickers to start chemical foaming reaction. Next to kickers stabilisers are needed for compact vinyls or compact parts of expanded vinyls. The requirements on the kickers and stabilisers regarding kicking behaviour, whiteness and heat stability are extremely high. New issues like odour and emissions become more and more important.

Baerostab	Form	Type	Characteristics
KK 40	L	BaZn	Standard, fast all-round kicker,
KK 42	L	KZn	Standard, fast all-round kicker,
KK 42-4	L	KZn	Standard, fast all-round kicker, 2-EHA free
KK 48	L	KZn	High performance, very fast kicker, excellent early colour
KK 430	L	KZn	Standard, fast kicker, good heat stability
UBZ 660-1 RF	L	BaZn	Standard, nonylphenol free, ptBBA free
CT 682 X RF	L	MgZn	Standard, phosphite free, 2-EHA free, nonylphenol free, ptBBA free, low odour
CT 680 X RF	L	MgZn	Standard, good colour properties, phosphite free, nonylphenol free, ptBBA free

L = liquid

Stabilisers for outdoor applications, coated textiles, roofing and coil coating

Roofing, coated textiles (e.g. tarpaulins, tents, inflatable tents, advertisement banners, sun-protections) and coil coating require particularly high light and weathering resistance. Coated textiles require special discolouration resistance caused by amine-based bonding agents.

Baerostab	Form	Type	Characteristics
UBZ 660-1 RF	L	BaZn	Standard, nonylphenol free, ptBBA free, suitable for coil coating
UBZ 711-1 X RF	L	BaZn	Standard, low phenol, 2-EHA free, nonylphenol free, ptBBA free
UBZ 729 RF	L	BaZn	Standard plus, 2-EHA free, nonylphenol free, ptBBA free, highly self lubricated, high whiteness, high compatibility with bonding agent
CT 9169 X RF	L	CaZn	Standard, all-purpose, 2-EHA free, nonylphenol free, ptBBA free, suitable for coil coating
NT 319 P MC 8763-1 CP	P	CaZn	High performance, non-tox for all types of films and profiles, phenol free, 2-EHA free, nonylphenol free, ptBBA free, low emission, performance could be improved by combination with liquid phosphites like Baerostab CWM 201
MC 8763-3 CP	P	CaZn	High performance, especially developed for pool liner, non-tox for all types of films and profiles, phenol free, 2-EHA free, nonylphenol free, ptBBA free, low emission, performance could be improved by combination with liquid phosphites like Baerostab CWM 201
ASM 711 ASM 715	P	Co-stabiliser	Co-stabilisers could be used in combination with basic stabilisers to improve heat ageing and discolouration resistance.

L = liquid; P = solid/powder



Front lit

Stabilisers for car underbody sealants and seam sealers

For these application plastisol will be applied by spraying process is used (high pressure spray nozzles). Stabilisers of low fatty acid content and low water absorption are preferred.

Baerostab	Form	Type	Characteristics
UBZ 771 RF	L	BaZn	Standard, nonylphenol free, ptBBA free, high heat stability,
NT 319 P MC 8763-1 CP	P	CaZn	High performance, free of compounds under discussion, long thermo-stability

Stabilisers for dip coating

Handles for tools and bicycles, hangers and gloves without fabric are manufactured by the hot dipping process. Wire baskets, frames, table and chair legs or textile supportrd gloves are provided with a PVC coating by cold dipping.

Baerostab	Form	Type	Characteristics
UBZ 660-1 RF	L	BaZn	Standard, nonylphenol free, ptBBA free,
UBZ 711-1 X RF	L	BaZn	Standard plus, low phenol, nonylphenol free, ptBBA free, 2-EHA free, Bisphenol A free
UBZ 771 RF	L	BaZn	Standard, nonylphenol free, ptBBA free, high heat stability
NT 1 S NT 170 P	P	CaZn	Standard, non-tox EC / FDA approved, phenol free, nonylphenol free, ptBBA free, 2-EHA free,
NT 170 PS	PS	CaZn	Standard, non-tox paste based on ESBO, EC / FDA approved, phenol free, nonylphenol free, ptBBA free, 2-EHA free
CT 680 X RF	L	MgZn	Standard, good colour properties, phosphite free, nonylphenol free, ptBBA free
CT 682 X RF	L	MgZn	Standard, phosphite free, 2-EHA free, nonylphenol free, ptBBA free, low odour
NT 326 RF	L	CaZn	Standard, non-tox, phosphite-free, phenol-free, 2-EHA free, nonylphenol free, ptBBA free, suitable for toys to be in compliance with EN 71

L = liquid; PS = paste; P = powder

Stabilisers for rotational moulding

Balls, dolls, anatomic models, toy animals and other articles are produced by rotational moulding. Besides from technical requests, for goods used by children final product must comply with the requirements of the European Toys Standard EN 71.

Baerostab	Form	Type	Characteristics
UBZ 711-1 X RF	L	BaZn	Standard plus, low phenol, nonylphenol free, ptBBA free, 2-EHA free, Bisphenol A free,
UBZ 771 RF	L	BaZn	Standard, nonylphenol free, ptBBA free, high heat stability,
CT 680 X RF	L	MgZn	Standard, good colour properties, phosphite free, nonylphenol free, ptBBA free
CT 682 X RF	L	MgZn	Standard, phosphite free, 2-EHA free, nonylphenol free, ptBBA free, low odour
NT 326 RF	L	CaZn	Standard, non-tox, phosphite-free, phenol-free, 2-EHA free, nonylphenol free, ptBBA free, suitable for toys to be in compliance with EN 71

L = liquid



Stabilisers for conveyor and processing belts

There are an uncountable number of different conveyor and processing belts. Belts are used for technical and food contact applications. Special requirements as HACCP (hazard analysis and critical control point concept) for food + pharma belts must be taken into consideration. Conveyor and processing belts are normally multi-layer systems coated on a fabric, often basecoat is containing amine based bonding agents.

Baerostab	Form	Type	Characteristics
UBZ 660-1 RF	L	BaZn	Standard, nonylphenol free, ptBBA free
UBZ 729 RF	L	BaZn	Standard plus, 2-EHA free, nonylphenol free, ptBBA free, high whiteness, high compatibility with bonding agent
UBZ 771 RF	L	BaZn	Standard, nonylphenol free, ptBBA free, high heat stability
NT 1 S NT 170 P	P	CaZn	Standard, non-tox EC / FDA approved, phenol free, nonylphenol free, ptBBA free, 2-EHA free
NT 170 PS	PS	CaZn	Standard, non-tox paste based on ESBO, EC / FDA approved, phenol free, nonylphenol free, ptBBA free, 2-EHA free
CT 680 X RF	L	MgZn	Standard, good colour properties, phosphite free, nonylphenol free, ptBBA free
CT 682 X RF	L	MgZn	Standard, phosphite free, 2-EHA free, nonylphenol free, ptBBA free, low odour
NT 313	L	CaZn	Standard, EC / FDA approved, contains TNPP, phenol free, 2-EHA free, ptBBA free,

L = liquid; PS = paste; P = powder

Other Additives for the Processing of Plastisol

Product	Type	Form	Dosage [phr]	Characteristics
Baerolub 72 O	Viscosity depressant	L	3,0–10,0	High flash point hydrocarbon, low VOC, improves mould release behaviour,
Baerolub 76	Viscosity depressant	L	3,0–10,0	Low flash point hydrocarbon, improves mould release behaviour
Baerolub L-KK	External lubricant	L	0,1–0,5	Hydrocarbon wax, suitable for twist-off cap application, it reduces opening force, EC / FDA approved
Baerostat 318 S	Antistatic agent	L	0,5–10,0	Improves electrical conductivity, imparts antistatic properties
Baerostat 351	Antistatic agent	L	0,5–10,0	Improves electrical conductivity, imparts antistatic properties
Laevisiel SL	Silica	P	0,5–1,0	Avoids formation of plate-out during processing, d50 = 5 µm
Laevisiel SP	Silica	P	0,5–1,0	Avoids formation of plate-out during processing, d50 = 20 µm
Baerostab ASM 104	Co-stabiliser	P	0,1–0,5	Organic co-stabiliser for combination with mixed metal stabilisers in order to prevent a pink discolouration during heat ageing (especially in darkness)
Baerostab ASM 711 Baerostab ASM 715	Co-stabiliser	P	0,5–2,5	Improvement of the heat ageing resistance in the temperature range of 120–150 °C (prevents discolouration and embrittlement) and for achievement of amine resistance (PUR foam backing)
Baerostab B 200 P	UV Absorber	P	0,2–0,4	Improvement of the light stability/weatherability for outdoor applications
Baerostab LSA	ESBO	L	2,0–4,0	Epoxidised soya bean oil, improvement of heat and light stability by synergetic effect together with mixed metal stabilisers
Baerostab LSU	Epoxy octyl stearate	L	2,0–4,0	Co-stabiliser, improvement of heat and light stability by synergetic effect together with mixed metal stabilisers
Baerostab CWM 35	Organo-Phosphite, TNPP	L	0,3–1,0	Organic co-stabiliser, improvement of heat stability and colour, low odour
Baerostab CWM 201	Organo-Phosphite, TTDP	L	0,3–1,0	Organic co-stabiliser, improvement of heat stability and colour, low odour, for outdoor applications
Baerostab CWM 203	Organo-Phosphite, DDPP	L	0,3–1,0	Organic co-stabiliser, improvement of heat stability and colour, low odour

L = liquid; P = powder

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Baerlocher Additives for PVC

- Additives for PVC (Overview)
- Lubricants
- Lead Stabilisers
- Extrusion & Injection Moulding
- Cables and Wires
- Calendered Films and Sheets
- Plastisol
- Sheets and Foamed Profiles

Baerlocher Special Additives

- Metallic Stearates

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