

# Additives, Driers, Accelerators & Catalysts

For Coatings, Paints, Composites, Printing Inks & Adhesives



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## HIGH-PERFORMANCE COBALT REPLACEMENT SOLUTIONS

Borchi® OXY-Coat and Borchi® Dragon are lines of cobalt-free curing additives for all types of oxidatively drying resin systems. Benefits include improved drying and non-yellowing performance compared to conventional driers. Borchi® OXY-Coat extends the coatings season window by providing consistent curing performance in all weather conditions (hot or cold, dry or humid) for short, medium and long oil alkyd systems. Borchi® Dragon is specially designed to accelerate dry performance in long oil and high solids alkyd systems; benefits include non-wrinkling with high build films and excellent film hardness. Borchi® OXY-Coat and Borchi® Dragon products meet stringent regulatory requirements as cobalt-free solutions.

Borchers Additive	System*	Chemistry	Description
<b>Borchi® OXY-Coat</b>	W/S	Organo metallic complex	<ul style="list-style-type: none"> <li>Improves drying activity, color performance, gloss and haze compared to cobalt-based driers in water- and solvent-based systems</li> <li>Based on a unique, highly active complex</li> <li>Can be used in coatings for adverse weather conditions</li> </ul>
<b>Borchi® OXY-Coat 1101</b>	W	Organo metallic complex	<ul style="list-style-type: none"> <li>VOC-free; improves drying activity, color performance, gloss and haze compared to cobalt-based driers</li> <li>Based on a unique, highly active complex</li> <li>Can be used in coatings for adverse weather conditions</li> </ul>
<b>Borchi® OXY-Coat 1310</b>	S	Organo metallic complex	<ul style="list-style-type: none"> <li>Recommended for thixotropic solvent-based systems</li> <li>Improves drying activity, color performance, gloss and haze compared to cobalt-based driers</li> <li>Can be used in coatings for adverse weather conditions</li> </ul>
<b>Borchi® OXY-Coat 1410</b>	W/S	Organo metallic complex	<ul style="list-style-type: none"> <li>Suitable for high solids and composites</li> <li>High concentration, low VOC version</li> <li>Based on a unique, highly active complex</li> </ul>
<b>Borchi® OXY-Coat 1510</b>	W	Organo metallic complex	<ul style="list-style-type: none"> <li>VOC-free; improves drying activity, color performance, gloss and haze compared to cobalt-based driers</li> <li>Based on a unique, highly active complex</li> <li>Very suitable for waterborne coatings</li> <li>Can be used in coatings for adverse weather conditions</li> </ul>
<b>Borchi® Dragon</b>	S	Organo metallic complex	<ul style="list-style-type: none"> <li>Improves drying activity, color performance, gloss and haze compared to cobalt-based driers in solvent-based systems</li> <li>Provides wrinkle-free drying and excellent film hardness in high solids systems</li> </ul>

## ANTI-SKINNING AGENTS

Ascini® (amino compound product), Borchi® Nox (cyclohexanone oxime, methyl ethyl ketoxime), and Borchi® Shield (amino / oxime compound) products offer formulators a choice in anti-skinning additives. Benefits include flexibility in meeting regulatory requirements for in-can skin formation in alkyd coatings.

Borchers Additive	System*	Chemistry	Description
<b>Ascini® Anti Skin 0445</b>	W/S	Amino compound dissolved in 1,2-propanediol	<ul style="list-style-type: none"> <li>Phenol- and MEKO-free; recommended to be used with Borchi® OXY-Coat cobalt replacement additives</li> <li>Controls surface dry retardation and keeps the film open longer to ensure deeper penetration of oxygen to lower film layers which promotes through dry and improves flow properties</li> </ul>

\* W = Water-based S = Solvent-based

## ANTI-SKINNING AGENTS (continued)

Ascinin® (amino compound product), Borchinox® (cyclohexanone oxime, methyl ethyl ketoxime), and Borchishield® (amino / oxime compound) products offer formulators a choice in anti-skinning additives. Benefits include flexibility in meeting regulatory requirements for in-can skin formation in alkyd coatings.

Borchers Additive	System*	Chemistry	Description
<b>Ascinin® Anti Skin 0444</b>	S	Amino compound dissolved in fatty acid ester	<ul style="list-style-type: none"> <li>Phenol- and MEKO-free; recommended to be used with Borchinox® OXY-Coat cobalt replacement additives</li> <li>Controls surface dry retardation and keeps the film open longer to ensure deeper penetration of oxygen to lower film layers which promotes through dry and improves flow properties</li> </ul>
<b>Borchinox® Nox C3</b>	S	Cyclohexanone oxime	<ul style="list-style-type: none"> <li>Anti-skinning agent especially for printing inks</li> </ul>
<b>Ascinin® Anti Skin 1240</b>	S	Amino compound dissolved in fatty acid ester	<ul style="list-style-type: none"> <li>Specially designed for oxidatively drying coatings systems and pastes with reduced VOC content</li> <li>MEKO-free; recommended to be used with Borchinox® OXY-Coat cobalt replacement additives</li> </ul>
<b>Borchinox® Nox 1640</b>	S	Cyclohexanone oxime	<ul style="list-style-type: none"> <li>MEKO replacement</li> <li>Does not cause discoloration or adversely affect the drying time of the paint system</li> </ul>
<b>Borchinox® Nox 614</b>	S	Phenolic anti-oxidant in solvent blend	<ul style="list-style-type: none"> <li>Acts as an anti-skinning agent and flow promoter in colorless and pigmented coatings</li> <li>Enhances the gloss and flow properties of air-drying systems</li> </ul>
<b>Borchinox® Nox M2</b>	S	Methyl ethyl ketoxime	<ul style="list-style-type: none"> <li>Delays the onset of drying of clear lacquers without affecting through drying</li> <li>Prolongs the open time of the film, thereby preventing flow problems and blistering</li> </ul>
<b>Borchishield®</b>	S	Amino / oxime compound dissolved in fatty acid ester	<ul style="list-style-type: none"> <li>Phenol- and MEKO-free, recommended to be used with Borchinox® Dragon high-performance catalyst in high solids alkyds</li> <li>Works synergistically with Borchinox® Dragon ligand technology to provide slower surface drying, allowing for proper oxidative through cure even with thicker films</li> </ul>

## DRIERS

Metal carboxylates for the oxidative and through drying of coatings and printing inks.

Product Name	Metal	Chemistry	Description/Solvent
<b>Calcium</b>			
<b>Octa-Soligen® Calcium 4, basic</b>	4% Ca	Octoate	White spirit
<b>Octa-Soligen® Calcium 5, basic</b>	5% Ca	Octoate	White spirit
<b>Octa-Soligen® Calcium 10, basic</b>	10% Ca	Octoate	White spirit
<b>Octa-Soligen® Calcium 5, neutral</b>	5% Ca	Octoate	White spirit
<b>Octa-Soligen® Calcium 7 HS, neutral</b>	7% Ca	Octoate	Fatty acid ester, free of VOC

## DRIERS (continued)

Metal carboxylates for the oxidative and through drying of coatings and printing inks.

Product Name	Metal	Chemistry	Description/Solvent
<b>Cobalt</b>			
Octa-Soligen® Cobalt 6	6% Co	Octoate	White spirit
Borchers® Deca Cobalt 10	10% Co	Neodecanoate	White spirit
Octa-Soligen® Cobalt 10	10% Co	Octoate	White spirit
Borchers® Deca Cobalt 12	12% Co	Neodecanoate	White spirit
Octa-Soligen® Cobalt 12	12% Co	Octoate	White spirit
Octa-Soligen® Cobalt 8 (oil)	8% Co	Octoate	Oil
Octa-Soligen® Cobalt 12 (oil)	12% Co	Octoate	Oil
Octa-Soligen® Cobalt 6 HS	6% Co	Octoate	Fatty acid ester, free of VOC
Octa-Soligen® Cobalt 12 HS	12% Co	Octoate	Fatty acid ester, free of VOC
Borchers® Deca Cobalt 7 aqua	7% Co	Neodecanoate	Water dispersible oil
21% Cobalt Hydroxy Ten-Cem®	21% Co	Neodecanoate	Drying stabilizer for oxidative drying paint systems; dispersion of cobalt dihydroxide in organic cobalt salts dissolves in white spirit
<b>Manganese</b>			
Octa-Soligen® Manganese 6	6% Mn	Octoate	White spirit
Borchers® Deca Manganese 8	8% Mn	Neodecanoate	White spirit
Octa-Soligen® Manganese 10	10% Mn	Octoate	White spirit
Octa-Soligen® Manganese 8 (oil)	8% Mn	Octoate	Oil
Octa-Soligen® Manganese 10 (oil)	10% Mn	Octoate	Oil
Borchers® Deca Manganese 8 HS	8% Mn	Neodecanoate	Fatty acid ester, free of VOC
Octa-Soligen® Manganese 10 HS	10% Mn	Octoate	Fatty acid ester, free of VOC
<b>Zinc</b>			
Octa-Soligen® Zinc 8	8% Zn	Octoate	White spirit
Octa-Soligen® Zinc 10	10% Zn	Octoate	White spirit
Octa-Soligen® Zinc 12	12% Zn	Octoate	White spirit
Octa-Soligen® Zinc 23	23% Zn	Octoate	Solvent-free
Borchers® Deca Zinc 10 aqua	10% Zn	Neodecanoate	Water dispersible oil
<b>Zirconium</b>			
Octa-Soligen® Zirconium 6	6% Zr	Octoate	White spirit
Octa-Soligen® Zirconium 10	10% Zr	Octoate	White spirit
Octa-Soligen® Zirconium 12	12% Zr	Octoate	White spirit

**DRIERS** (continued)

Metal carboxylates for the oxidative and through drying of coatings and printing inks.

Product Name	Metal	Chemistry	Description/Solvent
<b>Zirconium</b>			
<b>Borchers® Deca Zirconium 15</b>	15% Zr	Neodecanoate	White spirit
<b>Octa-Soligen® Zirconium 18</b>	18% Zr	Octoate	White spirit
<b>Octa-Soligen® Zirconium 24</b>	24% Zr	Octoate	White spirit
<b>Octa-Soligen® Zirconium 12 HS</b>	12% Zr	Octoate	Fatty acid ester, free of VOC
<b>Borchers® Deca Zirconium 15 HS</b>	15% Zr	Neodecanoate	Fatty acid ester, free of VOC
<b>Octa-Soligen® Zirconium 18 HS</b>	18% Zr	Octoate	Fatty acid ester, free of VOC
<b>Octa-Soligen® Zirconium 10 aqua</b>	10% Zr	Octoate	Water dispersible oil
<b>Other Metals</b>			
<b>7% AOC E</b>	7% Al	Aluminum	White spirit and glycol ether
<b>Borchers® Deca Barium 12.5</b>	12,5% Ba	Neodecanoate	White spirit
<b>Octa-Soligen® Barium 12.5</b>	12,5% Ba	Octoate	White spirit
<b>Borchers® Deca Lithium 2</b>	2% Li	Neodecanoate	White spirit
<b>Octa-Soligen® Strontium 10</b>	10% Sr	Octoate	White spirit
<b>Octa-Soligen® Iron 7/8</b>	7/8% Fe	Octoate	White spirit
<b>Octa-Soligen® Iron 7/8 HS</b>	7/8% Fe	Octoate	Fatty acid ester, free of VOC
<b>Blends</b>			
<b>Octa-Soligen® 27</b>	Co, Ca, Zr	Octoate	White spirit
<b>Octa-Soligen® 69</b>	Co, Zr	Octoate	White spirit
<b>Octa-Soligen® 141 Z</b>	Co, Ca, Zr, Zn	Octoate	White spirit
<b>Octa-Soligen® 146</b>	Co, Ca, Li	Octoate	White spirit
<b>Octa-Soligen® 155</b>	Co, Ca, Zr	Octoate	White spirit
<b>Octa-Soligen® 161</b>	Co, Ca, Zr	Octoate	White spirit
<b>Octa-Soligen® 173</b>	Co, Ba, Zr	Octoate	White spirit
<b>Octa-Soligen® 203</b>	Co, Ba, Zn	Octoate	White spirit
<b>Octa-Soligen® 69 HS</b>	Co, Zr	Octoate	Fatty acid ester, free of VOC
<b>Octa-Soligen® 123 aqua</b>	Co, Ba, Zn	Octoate	Water dispersible white spirit
<b>Octa-Soligen® 144 aqua</b>	Co, Zn, Zr	Octoate	Water dispersible oil
<b>Octa-Soligen® 421 aqua</b>	Co, Zr, Zn	Octoate	Water dispersible oil

## WETTING & DISPERSING ADDITIVES

Borchi® Gen dispersants are high-performance additives designed to disperse organic and inorganic pigments. Benefits include better pigment wetting resulting in lower grind times, improved color strength and improved transparency.

Borchers Additive	System*	Chemistry	% Active	Description
<b>Borchi® Gen O851</b>	W	Polyurethane	50% in water	<ul style="list-style-type: none"> <li>VOC- and APEO-free; specially designed for dispersing difficult organic pigments and carbon black in water-based systems</li> <li>Provides low viscosity dispersions, high transparency with organic pigments, high jetness with carbon black and long-term dispersion stability</li> </ul>
<b>Borchi® Gen SN 95</b>	W	Polyurethane	25% in water	<ul style="list-style-type: none"> <li>Specially designed for dispersing difficult organic pigments and carbon black in water-based systems</li> <li>Provides low viscosity dispersions, high transparency with organic pigments, high jetness with carbon black and long-term dispersion stability</li> </ul>
<b>Borchi® Gen WNS</b>	W	Low molecular weight polyether modified compounds	90% in water	<ul style="list-style-type: none"> <li>VOC- and APEO-free; recommended for water- or glycol-based universal tinting pastes</li> <li>Provides strong color development with organic pigments and improved storage stability</li> </ul>
<b>Borchi® Gen DFN</b>	W/S	Low molecular weight polyether modified compounds	100%	<ul style="list-style-type: none"> <li>VOC- and APEO-free; recommended for organic pigments and carbon black in water- and solvent-based systems</li> <li>Provides improved pigment wetting and stabilization of the consistency and color strength of finished coatings</li> </ul>
<b>Borchi® Gen 12</b>	W/S	Low molecular weight polyether modified compounds	100%	<ul style="list-style-type: none"> <li>VOC- and APEO-free; recommended for systems based on CAB and nitrocellulose</li> <li>Improves pigment wetting and dispersion time and has OH functionality that can be covalently bonded in cross-linked or two-component water- and solvent-based coatings systems</li> </ul>
<b>Borchi® Gen ND</b>	W/S	Phosphate/amine compound	100%	<ul style="list-style-type: none"> <li>Provides high gloss and strong color development, as well as good pigment wetting properties</li> <li>Acts as an anti-gelling agent when basic pigments and acidic binders are used</li> </ul>
<b>Borchi® Gen AP</b>	W/S	Phosphoric acid ester polycondensate	100%	<ul style="list-style-type: none"> <li>Improves pigment wetting of inorganic pigments and fillers</li> </ul>
<b>Borchi® Gen O650</b>	W/S	Amine neutralized phosphoric acid ester	100%	<ul style="list-style-type: none"> <li>VOC- and APEO-free; specially designed for stabilizing fillers and pigments with polar surfaces like titanium dioxide, iron oxides and hydrophilic organic pigments in water- and solvent-based systems</li> <li>Provides low viscosity dispersions; may significantly improve the color of tinted white and clear alkyd-based coatings</li> </ul>
<b>Borchi® Gen O451</b>	W/S	Polyurethane	100%	<ul style="list-style-type: none"> <li>VOC- and APEO-free; specially designed for dispersing difficult to disperse organic pigments and carbon black in water- and solvent-based systems</li> <li>Provides low viscosity dispersions, high transparency with organic pigments, high jetness with carbon black and long-term dispersion stability</li> </ul>

\* W = Water-based S = Solvent-based

**WETTING & DISPERSING ADDITIVES** (continued)

Borchi® Gen dispersants are high-performance additives designed to disperse organic and inorganic pigments. Benefits include better pigment wetting resulting in lower grind times, improved color strength and improved transparency.

Borchers Additive	System*	Chemistry	% Active	Description
<b>Borchi® Gen 1252</b>	W/S	Acrylic ester copolymer	100%	<ul style="list-style-type: none"> <li>VOC- and APEO-free; non-ionic</li> <li>Especially suitable for wood coatings, decorative coatings, industrial coatings and pigment concentrates with organic and inorganic pigments</li> </ul>
<b>Borchi® Gen 0755</b>	W/S	Polyurethane	100%	<ul style="list-style-type: none"> <li>VOC- and APEO-free; recommended for dispersing difficult organic pigments and carbon black in solvent-based systems; broad compatibility; can be used in nitrocellulose</li> <li>Provides low viscosity dispersions, high transparency with organic pigments, high jetness with carbon black and long-term dispersion stability</li> </ul>
<b>Borchi® Gen 911</b>	S	Modified polyester	70% in white spirits	<ul style="list-style-type: none"> <li>Recommended for alkyd solvent-based coatings, as well as nitrocellulose-based systems</li> <li>Provides improved pigment wetting, shorter dispersion time of organic and inorganic pigments and good storage stability of the finished paint</li> </ul>
<b>Borchi® Gen 1051</b>	S	Polyurethane	45% in BAC/MPA	<ul style="list-style-type: none"> <li>Specially designed for dispersing organic blue, green and red pigments in solvent-based systems</li> <li>Provides low viscosity dispersions, high transparency and long-term dispersion stability</li> </ul>
<b>Borchi® Gen 1251</b>	S	Polyurethane	85% in MPA	<ul style="list-style-type: none"> <li>Provides excellent pigment wetting, color development and high gloss, as well as low viscosity dispersions and long-term dispersion stability</li> <li>Recommended for organic pigments and carbon black in solvent-based systems</li> </ul>
<b>Borchi® Gen 1451</b>	S	Polyurethane	30% in EGDA	<ul style="list-style-type: none"> <li>APEO-free; specially designed for dispersing difficult organic pigments and carbon black in solvent-based systems</li> <li>Provides low viscosity dispersions, high transparency with organic pigments and long-term dispersion stability</li> </ul>
<b>Borchi® Gen 1452</b>	S	Polyurethane	45% in EGDA	<ul style="list-style-type: none"> <li>APEO-free; specially designed for dispersing difficult organic pigments and carbon black in solvent-based systems</li> <li>Provides low viscosity dispersions, high transparency with organic pigments and long-term dispersion stability</li> </ul>
<b>Borchi® Gen 1750</b>	W	Polyurethane	40% in water	<ul style="list-style-type: none"> <li>VOC-free; specially designed for transparent and opaque iron oxides, inorganic pigments and extenders in water-based systems</li> <li>Small particle size dispersions produce high transparency, and low viscosity grinds allow up to 40 % pigment loading with transparent oxide pigments and over 60 % with opaque iron oxides</li> </ul>
<b>Borchi® Gen 1757</b>	W	Copolymer with pigment affinic groups	100%	<ul style="list-style-type: none"> <li>VOC-free; hybrid wetting and dispersing additive providing a combination of various principles of pigment stabilization</li> <li>Produces vibrant color and superior opacity with a wide range of bismuth vanadate pigments</li> </ul>

## COLOR BOOST

Borchi® Boost additives improve color acceptance for ready made dispersions and tinting systems. Benefits include stronger tints with the convenience of a post add solution in a wide range of base paints. VOC- and APEO-free.

Borchers Additive	System*	% Active	Description
<b>Borchi® Boost 510W</b>	W	50% in water	<ul style="list-style-type: none"> <li>Improves color acceptance in medium to low polarity systems</li> <li>Provides stronger tints with organic pigment dispersions and carbon blacks</li> </ul>
<b>Borchi® Boost 570WS</b>	W/S	100%	<ul style="list-style-type: none"> <li>Improves color acceptance in medium to low polarity systems</li> <li>Provides stronger tints with organic pigment dispersions and carbon blacks</li> </ul>
<b>Borchi® Boost 540WS</b>	W/S	100%	<ul style="list-style-type: none"> <li>Improves color acceptance in medium to high polarity systems</li> <li>Provides stronger tints with organic pigment dispersions and carbon blacks</li> </ul>

## COMPATIBILIZERS

Borchi® Add products improve compatibility of universal water-based concentrates in solvent-based alkyd base paints. Benefits include improved color acceptance and reduced pigment flooding and floating as a post add solution. VOC- and APEO-free.

Borchers Additive	System*	% Active	Description
<b>Borchi® Add 406WS</b>	W/S	90% in water	<ul style="list-style-type: none"> <li>Reduces or eliminates rub-out of universal water-based concentrates in solvent-based alkyd bases</li> <li>Improves compatibility</li> </ul>
<b>Borchi® Add 409WS</b>	W/S	100%	<ul style="list-style-type: none"> <li>Reduces or eliminates rub-out of universal water-based concentrates in solvent-based alkyd bases</li> <li>Improves compatibility</li> </ul>

## RHEOLOGY MODIFIERS

Borchi® Gel additives are associative and non-associative rheology modifiers for water-based coatings that have a significant influence on the storage stability and application properties of the coatings system. Benefits include a full range of low to high shear polyurethane, acrylic and zirconium complex thickeners to ensure optimal flow and leveling combined with anti-sag performance.

Borchers Additive	System*	Functionality	% Active	Description
<b>Polyurethane (PU) Based Associative Thickeners</b>				
<b>Borchi® Gel 0620</b>	W	Low shear/ very strongly pseudoplastic	40% in water/butyl glycol (40% PU)	<ul style="list-style-type: none"> <li>Tin-, APEO- and emulsifier-free; develops viscosity stability and improves rheological properties mainly in the lower shear range for water-based systems</li> <li>Enables the application of thick layers on vertical surfaces, effectively prevents sagging and does not yellow or cause chalking in the cured film</li> </ul>
<b>Borchi® Gel 0621</b>	W	Low shear/ very strongly pseudoplastic	30% in water (20% PU)	<ul style="list-style-type: none"> <li>Tin-, VOC- and APEO-free; develops viscosity stability and improves rheological properties mainly in the low shear range for water-based systems</li> <li>Enables application of thick layers on vertical surfaces, effectively prevents sagging and does not yellow or cause chalking in the cured film</li> </ul>

\* W = Water-based S = Solvent-based

**RHEOLOGY MODIFIERS** (continued)

Borchi® Gel additives are associative and non-associative rheology modifiers for water-based coatings that have a significant influence on the storage stability and application properties of the coatings system. Benefits include a full range of low to high shear polyurethane, acrylic and zirconium complex thickeners to ensure optimal flow and leveling combined with anti-sag performance.

Borchers Additive	System*	Functionality	% Active	Description
<b>Polyurethane (PU) Based Associative Thickeners</b>				
<b>Borchi® Gel O630</b>	W	Low shear/ very strongly pseudoplastic	25% in water/DPM (25% PU)	<ul style="list-style-type: none"> <li>• Tin-, APEO- and emulsifier-free; develops viscosity stability and improves rheological properties mainly in the lower shear range for water-based systems</li> <li>• Enables the application of thick layers on vertical surfaces, effectively prevents sagging and does not yellow or cause chalking in the cured film</li> <li>• Butyl glycol-free</li> </ul>
<b>Borchi® Gel PW 25</b>	W	Low shear/ strongly pseudoplastic	25% in water/ propylene glycol (25% PU)	<ul style="list-style-type: none"> <li>• Emulsifier-free; exceptionally good thickening properties in most fine particle dispersion binders with low emulsifier content in water-based systems</li> <li>• Promotes longer open times than normal due to its high capacity for water retention</li> </ul>
<b>Borchi® Gel LW 44</b>	W	Low shear/ strongly pseudoplastic	46% in water (24% PU)	<ul style="list-style-type: none"> <li>• VOC- and APEO-free; develops viscosity stability mainly in the low shear range for water-based coatings systems</li> <li>• Will not cause yellowing or chalking in cured film</li> </ul>
<b>Borchi® Gel THIX 921</b>	W	Low shear/ pseudoplastic	32% in water (25% PU)	<ul style="list-style-type: none"> <li>• Thixotropic and shear thinning in behavior</li> <li>• Contributes to obtaining enhanced storage stability for coatings and enhances leveling and application properties of paint formulations</li> </ul>
<b>Borchi® Gel O625</b>	W	Medium shear/ pseudoplastic	34% in water (25% PU)	<ul style="list-style-type: none"> <li>• VOC- and APEO-free; develops viscosity stability and improves rheological properties mainly in the medium and high shear range for water-based systems</li> <li>• Improves storage stability, leveling and application properties</li> </ul>
<b>Borchi® Gel L 75 N</b>	W	Medium shear/ pseudoplastic	50% in water (25% PU)	<ul style="list-style-type: none"> <li>• VOC- and APEO-free; develops viscosity stability in water-based coatings mainly in the medium shear range; good pigment wetting properties</li> <li>• Improves properties for easier brush and roller application and does not yellow or cause chalking in the cured film</li> </ul>
<b>Borchi® Gel L 76</b>	W	Medium shear/ pseudoplastic	50% in water (25% PU)	<ul style="list-style-type: none"> <li>• Improves rheological properties of aqueous coatings systems, allowing for easier application of paint with brush or roller, especially for emulsion paints</li> </ul>
<b>Borchi® Gel O626</b>	W	Medium shear/ pseudoplastic	37% in water (25% PU)	<ul style="list-style-type: none"> <li>• Develops viscosity stability and improves rheological properties mainly in the medium and high shear range for water-based systems</li> <li>• Improves storage stability, leveling and application properties</li> </ul>
<b>Borchi® Gel O434</b>	W	High shear/ newtonian	20% in water (20% PU)	<ul style="list-style-type: none"> <li>• VOC- and APEO-free; recommended for latex dispersions and water-based coatings systems in the high shear range</li> <li>• Promotes good gloss, flow and leveling; quickly develops high shear thixotropy</li> </ul>
<b>Borchi® Gel O435</b>	W	High shear/ newtonian	50% in water (30% PU)	<ul style="list-style-type: none"> <li>• APEO-free; develops outstanding brush and roll application properties and high shear thixotropy for water-based systems</li> <li>• Produces viscosity stability mainly in the higher shear range</li> </ul>
<b>Borchi® Gel A LA</b>	W	Low shear/ strongly pseudoplastic	10% anionic acrylate polymer in water	<ul style="list-style-type: none"> <li>• APEO-free; improves flow and leveling properties of water-based coatings systems mainly in high gloss emulsions</li> <li>• Builds viscosity in the low shear range and swells water in the coating rather than associating it with binders</li> </ul>

## RHEOLOGY MODIFIERS (continued)

Borchi® Gel additives are associative and non-associative rheology modifiers for water-based coatings that have a significant influence on the storage stability and application properties of the coatings system. Benefits include a full range of low to high shear polyurethane, acrylic and zirconium complex thickeners to ensure optimal flow and leveling combined with anti-sag performance.

Borchers Additive	System*	Functionality	% Active	Description
<b>Polyurethane (PU) Based Associative Thickeners</b>				
<b>Borchi® Gel PN</b>	W	Low shear/ strongly pseudoplastic	Zirconium complex neutralized with ammonia	<ul style="list-style-type: none"> <li>Additive for use in water-based coatings systems whose binders contain free hydroxyl and carboxyl groups</li> <li>Develops viscosity in the low shear range; prevents sagging and settling; improves viscosity stability of a coating after tinting with universal colorants; no need for biocides</li> </ul>
<b>Non-Associative Thickeners</b>				
<b>Borchi® Gel NA</b>	W	Low shear/ strongly pseudoplastic	Zirconium complex neutralized with sodium hydroxide	<ul style="list-style-type: none"> <li>VOC-, emulsifier- and APEO-free; thixotropic and shear thinning in behavior; additive for use in water-based coatings systems whose binders contain free hydroxyl and carboxyl groups</li> <li>Improves viscosity stability of a coating after tinting with universal colorants; does not contain any odor</li> </ul>
<b>Borchi® Set 134</b>	S	Low shear/ strongly pseudoplastic	25% in modified alkyd resin and solvent mixture	<ul style="list-style-type: none"> <li>Anti-settling agent for solvent-based systems containing dense pigments</li> <li>Inhibits the hard settling of coatings and easily incorporated with high shear dispersing equipment</li> </ul>
<b>Borchi® Gel Thixo 2</b>	S	Low shear/ strongly pseudoplastic	N/A	<ul style="list-style-type: none"> <li>Enhances thixotropic character of paints with solvents of non-polar or weakly polar nature</li> <li>Reduces settling and floating of pigments and promotes pigment dispersion during manufacturing</li> </ul>

## FLOW & LEVELING ADDITIVES

Borchi® Gol high-performance flow and leveling additives are modified polydimethylsiloxane (PDMS) and acrylic additives which reduce the surface tension of the coating to improve flow, substrate wetting and slip. Benefits include elimination of surface defects such as fish eyes and cratering. Many surface defects are related to surface tension, and by correcting the surface tension of a system, most surface defects can be resolved.

Borchers Additive	System*	Chemistry	% Active	Description
<b>Borchi® Gol 1570</b>	W/S	Polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>Improves substrate wetting on challenging surfaces or dirty substrates, and enhances slip properties when used in combination with Borchi® Gol LA 2 or Borchi® Gol LA 232</li> <li>Inhibits the formation of surface defects like craters and pinholes; VOC-free</li> </ul>
<b>Borchi® Gol 1670</b>	S	Polydimethylsiloxane	100%	<ul style="list-style-type: none"> <li>Reduces surface tension</li> <li>Prevents pigment float and Bénard cell formation</li> </ul>
<b>Borchi® Gol 1375</b>	W/S	Silicone-free mixture of ethoxylated alcohols and surfactants	N/A	<ul style="list-style-type: none"> <li>VOC- and APEO-free; recommended for challenging surfaces and dirty substrates in water- and solvent-based systems</li> <li>Provides reductions in surface tension, improvements in the wetting process and low-foaming tendencies in formulations</li> </ul>

\* W = Water-based S = Solvent-based

## FLOW & LEVELING ADDITIVES (continued)

Borchi® Gol high-performance flow and leveling additives are modified polydimethylsiloxane (PDMS) and acrylic additives which reduce the surface tension of the coating to improve flow, substrate wetting and slip. Benefits include elimination of surface defects such as fish eyes and cratering. Many surface defects are related to surface tension, and by correcting the surface tension of a system, most surface defects can be resolved.

Borchers Additive	System*	Chemistry	% Active	Description
<b>Borchi® Gol LA 2</b>	W/S	Solvent-free polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; provides lowered surface tension as well as mar, scratch and block resistance</li> <li>Inhibits the formation of surface defects and improves final film appearance</li> </ul>
<b>Borchi® Gol LA 50</b>	W/S	Polyether modified polysiloxane (PDMS)	50% in dipropylene glycol monobutyl ether	<ul style="list-style-type: none"> <li>Lowers surface tension and inhibits the formation of surface defects in non-polar surfaces</li> <li>Can be used in conjunction with Borchi® Gol LA 2 for better slip</li> </ul>
<b>Borchi® Gol LA 200</b>	W/S	Solvent-free polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; provides improvements in substrate wetting and block and scratch resistance</li> <li>Quickly removes air bubbles from applied coated surfaces and avoids micro foam formation at all production stages</li> </ul>
<b>Borchi® Gol LA 232</b>	W/S	Solvent-free polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; provides reductions in surface tension, increases in surface slip and improvements in block and scratch resistance</li> <li>Quickly removes air bubbles from applied films to provide smooth surfaces</li> </ul>
<b>Borchi® Gol 3467</b>	W/S	Solvent-free polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; suitable for clear and pigmented systems, hydrophobic surfaces and water- and solvent-based formulations in wood substrates</li> <li>Provides improvements in substrate wetting and wetting of difficult to wet and dirt contaminated substrates</li> </ul>
<b>Borchi® Gol OL 44</b>	W/S	Solvent-free polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; broad compatibility; eliminates craters and uneven film applications</li> <li>Increases and improves slip properties with no recoatability issues</li> </ul>
<b>Borchi® Gol 8701</b>	S	Silicone-free	50% in methoxypropyl acetate	<ul style="list-style-type: none"> <li>Specially designed for solvent-based coatings systems</li> <li>Provides improvement in substrate wetting and flow, as well as excellent slip without inter-coat adhesion interference</li> </ul>
<b>Borchi® Gol LAC 80</b>	W/S	Solvent-free polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; provides excellent flow and a clear increase in the surface smoothness of paint films; good block resistance</li> <li>Prevents crater formation and largely prevents bleeding in hammer finishes</li> </ul>
<b>Borchi® Gol 1473</b>	W/S	Solvent-free polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; recommended for top coats that are cured at room temperature and below 150 °C in solvent- and water-based systems, as well as solvent-free systems</li> <li>Provides improvements in surface smoothness by reducing orange peel and preventing the formation of craters</li> </ul>
<b>Borchi® Gol 1474</b>	W/S	Solvent-free polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; provides improvements in flow, leveling and slip properties as well as mar resistance</li> <li>Inhibits the formation of surface defects like craters and pin holes</li> </ul>
<b>Borchi® Gol H 250</b>	S	Phenyl modified polysiloxane (PDMS)	50% in xylene/butanol	<ul style="list-style-type: none"> <li>Provides improvements in leveling of baking enamels</li> <li>Stable up to 250 °C</li> </ul>

## FLOW & LEVELING ADDITIVES (continued)

Borchi® Gol high-performance flow and leveling additives are modified polydimethylsiloxane (PDMS) and acrylic additives which reduce the surface tension of the coating to improve flow, substrate wetting and slip. Benefits include elimination of surface defects such as fish eyes and cratering. Many surface defects are related to surface tension, and by correcting the surface tension of a system, most surface defects can be resolved.

Borchers Additive	System*	Chemistry	% Active	Description
<b>Borchi® Gol PL</b>	S	Solvent-free phenyl modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; eliminates craters and other surface defects characterized by poor flow in can and coil coatings; stable up</li> <li>Effective flow promoter and compatible with numerous organic binders</li> </ul>
<b>Borchi® Gol M 51</b>	S	Polyether modified polysiloxane (PDMS)	100%	<ul style="list-style-type: none"> <li>VOC-free; provides reductions in surface tension and enhanced flow</li> <li>Counteracts surface defects caused by silicone-based additives</li> </ul>
<b>Borchi® Gol LA 6</b>	S	Polyether modified polysiloxane (PDMS)	12% in xylene	<ul style="list-style-type: none"> <li>Provides enhanced substrate wetting, lowered surface tension and block and slip resistance</li> <li>Inhibits the formation of surface defects</li> </ul>

## DEFOAMERS

Borchers® AF and Borchi® Gol high-performance defoamers are modified polydimethylsiloxane (PDMS) and non-silicone defoamers designed for water- and solvent-based systems. Benefits include foam elimination during the production process (pumping, stirring and grinding) as well as during application by brushing, rolling and spraying.

Borchers Additive	System*	Chemistry	% Active	Description
<b>Borchi® Gol LA 200</b>	W/S	Polyether modified polysiloxane	100%	<ul style="list-style-type: none"> <li>VOC-free; provides improvements in substrate wetting and block and scratch resistance</li> <li>Supports quick air release of entrapped air in the surface during application</li> </ul>
<b>Borchers® AF 1171</b>	W/S	Modified polysiloxane with hydrophobic particles	>98%	<ul style="list-style-type: none"> <li>Prevents foaming during paint production</li> <li>Particularly suitable for millbase defoaming for aqueous decorative and general industrial coatings</li> </ul>
<b>Borchers® AF T</b>	W/S	Silicone-free tri-n-butyl phosphate	N/A	<ul style="list-style-type: none"> <li>Destroys foam and prevents foam formation</li> <li>Suitable for pigment pastes and highly filled systems, as well as improving wettability of adhesives</li> </ul>
<b>Borchers® AF 1270</b>	S	Fluorinated organo-modified polysiloxane	2% in butyl acetate	<ul style="list-style-type: none"> <li>Recommended for solvent-based epoxies, unsaturated polyesters, two-component polyurethane systems, alkyds and UV systems</li> <li>Supports fast air release of entrapped air on the film surface</li> </ul>
<b>Borchi® Gol E2</b>	S	Silicone-free hydrocarbon resins	100%	<ul style="list-style-type: none"> <li>Helps eliminate flow defects and craters caused by air entrapment</li> <li>Benefits shown in thick film application for air release</li> </ul>
<b>Borchi® Gol 0011</b>	S	Polysiloxane modified preparation of fatty acid esters	100%	<ul style="list-style-type: none"> <li>Reduces pigment floating and provides barrier properties to cured film</li> <li>Suitable for high-build systems; can be used in combination with Borchi® Gol E2 in epoxies for improved flow and deaeration</li> </ul>
<b>Borchi® Gol 1470</b>	S	Silicone-free solution of foam destroying polymers	37% in aromatic petroleum solvent	<ul style="list-style-type: none"> <li>Helps eliminate flow defects and craters caused by air entrapment</li> <li>Can be used in solvent-free and solvent-based one- and two-component industrial coatings and sealants</li> </ul>

\* W = Water-based S = Solvent-based

# CATALYSTS

Metal carboxylates for urethanes and rubber adhesion.

Product Name	Metal	Description
<b>Polyurethane</b>		
<b>Borchers® LH 10</b>	1,8% Sn	<ul style="list-style-type: none"> <li>• Specially designed for water-based two-component polyurethane coatings</li> <li>• Accelerates the cross-linking process and improves the drying of chemically curing systems</li> </ul>
<b>Borchi® Kat 28</b>	28% Sn	<ul style="list-style-type: none"> <li>• Tin catalyst based on synthetic monocarboxylic acids; catalyst for one- and two-component reactions; for coatings and polyurethane foams; for the synthesis of (unsaturated) polyesters, for silicones and urethane alkyls</li> </ul>
<b>Borchi® Kat 315 EU</b>	16% Bi	<ul style="list-style-type: none"> <li>• Solvent-free; specially designed for one- and two-component polyurethane systems and RTV silicones</li> <li>• Accelerates the chemical reaction between the polyol and isocyanate component of polyurethane foam systems</li> </ul>
<b>Borchi® Kat 24</b>	24% Bi	<ul style="list-style-type: none"> <li>• Solvent-free; specially designed for one- and two-component polyurethane systems</li> <li>• Accelerates the chemical reaction between the alcohol and isocyanate component of polyurethane coatings systems, thus allowing optimum control of the drying properties</li> </ul>
<b>12% Cobalt Catalyst 510</b>	12% Co	<ul style="list-style-type: none"> <li>• Cobalt accelerator developed for the special needs of the unsaturated polyester resin industry; used in conjunction with organic peroxide catalysts; dissolved in white spirit</li> </ul>
<b>Octa-Soligen® Cobalt 6 (xylene)</b>	6% Co	<ul style="list-style-type: none"> <li>• Cobalt catalyst; accelerator for polyester systems; dissolved in xylene</li> </ul>
<b>Octa-Soligen® Cobalt 10 (xylene)</b>	10% Co	<ul style="list-style-type: none"> <li>• Cobalt catalyst; accelerator for polyester systems; dissolved in xylene</li> </ul>
<b>Octa-Soligen® Cobalt 12 (xylene)</b>	12% Co	<ul style="list-style-type: none"> <li>• Cobalt catalyst; accelerator for polyester systems; dissolved in xylene</li> </ul>
<b>Borchers® Deca Cobalt 10 (xylene)</b>	10% Co	<ul style="list-style-type: none"> <li>• Cobalt catalyst; accelerator for polyester systems; dissolved in xylene</li> </ul>
<b>Borchers® Deca Copper 8</b>	8% Cu	<ul style="list-style-type: none"> <li>• Copper neodecanoate dissolved in white spirit; provides longer processing time and lowers the exothermic peak of unsaturated polyester formulations</li> </ul>
<b>15% Potassium Hex-Cem® EU</b>	15% K	<ul style="list-style-type: none"> <li>• Specially designed for unsaturated polyesters and pot life stabilizers for two-component polyurethane systems</li> <li>• Potassium 2-ethylhexanoate dissolved in diethylene diglycol which combined with cobalt supports the accelerating effect and discoloration of unsaturated polyesters dissolved in styrene, ultimately requiring less cobalt in the system</li> </ul>
<b>Borchi® Kat 15</b>	15% Zn	<ul style="list-style-type: none"> <li>• Tin-free catalyst based on pure zinc neodecanoate with moderate reactivity for environmentally friendly solvent-based one- and two-component polyurethane coatings and other chemical systems</li> <li>• Diluted in dearomatized white spirit</li> </ul>
<b>Borchi® Kat 0761</b>	15% Zn	<ul style="list-style-type: none"> <li>• Tin-free catalyst based on pure zinc neodecanoate with moderate reactivity for environmentally friendly solvent-based one- and two-component polyurethane coatings and other chemical systems</li> <li>• Diluted in fatty ester</li> </ul>
<b>Borchi® Kat 22</b>	22% Zn	<ul style="list-style-type: none"> <li>• Tin-, VOC- and solvent-free metal carboxylate-based catalyst with moderate reactivity for solvent-based and solvent-free one- and two-component polyurethane coatings and chemical synthesis</li> </ul>

## CATALYSTS (continued)

Metal carboxylates for urethanes and rubber adhesion.

Product Name	Metal	Description
<b>Borchi® Kat 0243</b>	Bi, Li	<ul style="list-style-type: none"> <li>• Tin-, VOC- and solvent-free catalyst based on a combination of metal carboxylates for polyurethane reactions</li> <li>• Especially for solvent-based and solvent-free one- and two-component polyurethane clear coats and two-component polyurethane adhesives as well as for the modification of silicones</li> </ul>
<b>Borchi® Kat 0244</b>	Bi, Zn	<ul style="list-style-type: none"> <li>• Tin-, VOC- and solvent-free catalyst based on a combination of metal carboxylates for polyurethane reactions</li> <li>• Especially for solvent-based and solvent-free one- and two-component polyurethane clear coats and two-component polyurethane adhesives</li> </ul>
<b>Borchi® Kat 0245</b>	Zn, Ca	<ul style="list-style-type: none"> <li>• Tin-free metal carboxylate-based catalyst with moderate activity esp. for solvent-based pigmented one- and two-component polyurethane coatings</li> <li>• Dissolved in xylene</li> </ul>

## MOISTURE SCAVENGERS

Additive OF and Additive TI are 100% active moisture scavenger products. Benefits include improved storage stability and dehydrating pigments, fillers and solvents in the production process of 1K and 2K polyurethane systems.

Borchers Additive	System*	Chemistry	% Active	Description
<b>Additive OF</b>	S	Triethyl ortho formate	100%	<ul style="list-style-type: none"> <li>• Eliminates moisture in solvent-based one- and two-component polyurethane coatings during shelf life</li> <li>• Compatible with most polyol and isocyanate components</li> </ul>
<b>Additive TI</b>	S	P-toluene sulfonyl isocyanate	100%	<ul style="list-style-type: none"> <li>• Removes moisture introduced with solvents, pigments and fillers in one- and two-component polyurethane systems in production</li> <li>• Low viscosity, monofunctional isocyanate which chemically reacts with water to form an inert amide</li> </ul>

## SPECIALTIES

The specialties line of additives contains essential products for coatings formulations. These include, among others: adhesion promoters, pot life stabilizers and nano-silica dispersions.

Borchers Additive	System*	Chemistry	% Active	Description
<b>Adhesion Promoters</b>				
<b>Borchi® Gen HMP-F</b>	W/S	Oil-free polyester resin	80% in solvent mixture	<ul style="list-style-type: none"> <li>Recommended for baking finishes in water- and solvent-based systems</li> <li>Improves adhesion to metal in reactive coatings</li> </ul>
<b>Borchi® Gen HE</b>	S	Oil-free polyester resin	60% active in xylene	<ul style="list-style-type: none"> <li>Recommended for baking finishes in solvent-based systems</li> <li>Improves adhesion and long-term elasticity of coatings on metal substrates and adhesion of metallic pigments in paints</li> </ul>
<b>Anti-Blocking Agents</b>				
<b>Borchi® Coll 10</b>	W	Colloidal dispersion of silica	30% in water	<ul style="list-style-type: none"> <li>Particle size 9 nm</li> <li>Best transparency and effectiveness; maximum matting effect; improves surface hardness at low film builds</li> </ul>
<b>Borchi® Coll 20</b>	W	Colloidal dispersion of silica	30% in water	<ul style="list-style-type: none"> <li>Particle size 18 nm</li> <li>Low matting effect; improves surface hardness at low film builds</li> </ul>
<b>Pot Life Stabilizers</b>				
<b>Regulator ZL</b>	S	Acidic cation exchanger	N/A	<ul style="list-style-type: none"> <li>Highly acidic cation exchanger specially designed for solvent-free two-component polyurethane paints</li> <li>Alkaline fillers may (by catalytic action) shorten the application time of solvent-free two-component polyurethane systems - Regulator ZL can be added as cation exchanger in order to counteract this</li> </ul>
<b>Anticorrosive</b>				
<b>Bayoxide® Z active</b>	W/S	Zinc Oxide	100%	<ul style="list-style-type: none"> <li>Increases through drying for additives and topcoats and improves corrosion protection behavior and hardness</li> <li>Reduces yellowing</li> </ul>

# borchers

A MILLIKEN BRAND

## USA

Borchers Americas Inc  
811 Sharon Drive  
Westlake, OH 44145  
borchers.cust.service.us@milliken.com  
+1 800-321-9696 / 440-899-2950

## Germany

Borchers GmbH  
Berghausener Straße 100  
40764 Langenfeld, Germany  
borchers.cust.service@milliken.com  
+49 2173 3926666

## China

Milliken Enterprise Management (Shanghai) Co.,Ltd.  
Chemical Division-Borchers  
15th Floor, Building 2, No.1535 Hongmei Rd  
Shanghai China, 200233  
borchers.cust.service@milliken.com  
+86 21 6145 5555

## India

Milliken Chemical & Textile (India) Co.  
Private Limited  
601/602 Main St, Hiranandani Gardens,  
Sainath Nagar, Powai, Mumbai 400076  
borchers.cust.service@milliken.com  
+91 98338 68167  
+91 98331 14172

In this brochure you will find an overview of our additives for coatings, paints, composites, printing inks and adhesives.

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