



**Biesterfeld**

*Competence in Solutions*



Biesterfeld  
Spezialchemie

**Product Range**  
**Polymer Additives**

# Our Partners for Polymer Additives



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# Antioxidants

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Songnox® 1010</b>	Songwon Ind.	Tetrakis[methylene-3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate] methane	6683-19-8	Phenolic antioxidant as primary stabilizer for plastics
<b>Songnox® 1076</b>	Songwon Ind.	Octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	2082-79-3	
<b>Songnox® 1135</b>	Songwon Ind.	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, C7C9-branched alkyl esters	125643-61-0	
<b>Songnox® 2450</b>	Songwon Ind.	Triethylene glycol-bis-3-(3-tert-butyl-4-hydroxy-5-methylphenyl) propionate	36443-68-2	
<b>Songnox® 3114</b>	Songwon Ind.	Tris(3,5-di-tert-butyl-4-hydroxybenzyl) isocyanurate	27676-62-6	
<b>Songnox® 1035</b>	Songwon Ind.	Thiodiethylene bis[3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate]	41484-35-9	
<b>Songnox® 1098</b>	Songwon Ind.	N,N'-Hexamethylenebis(3,5-di-tert-butyl-4-hydroxyhydrocinnamamide)	23128-74-7	
<b>Songnox® 1330</b>	Songwon Ind.	1,3,5-trimethyl-2,4,6-tris(3,5-di-tert-butyl-4-hydroxybenzyl) benzene	1709-70-2	
<b>Songnox® 5650</b>	Songwon Ind.	2,6-di-tert-butyl-4-(4,6-bis(octylthio)-1,3,5-triazin-2-ylamino) phenol	991-84-4	
<b>Songnox® 5057</b>	Songwon Ind.	Diphenylamine, octylated & butylated	68411-46-1	
<b>Songnox® 5721</b>	Songwon Ind.	Mixture of Songnox 1135 + Songnox 5057 (2:1)	125643-61-0 + 68411-46-1	Blend of phenolic and aminic antioxidants as primary stabilizer for plastics
<b>Songnox® 1024</b>	Songwon Ind.	2',3-bis[[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyl]propionohydrazide	32687-78-8	Phenolic antioxidant as metal deactivator for plastics
<b>Songnox® 1680</b>	Songwon Ind.	Tris (2,4-di-tert-butylphenyl) phosphite	31570-04-4	Phosphite antioxidant as processing stabilizer for plastics
<b>Songnox® 6260</b>	Songwon Ind.	Bis (2,4-di-tert-butylphenyl) pentaerythritol diphosphite	26741-53-7	
<b>Songnox® 6280</b>	Songwon Ind.	Mixture of SONGNOX 6260 & Mg, Al talcite	26741-53-7 + 11097-59-9	
<b>Songnox® 9228</b>	Songwon Ind.	Bis (2,4-dicumylphenyl) pentaerythritol diphosphite	154862-43-8	
<b>Songnox® PQ</b>	Songwon Ind.	Phosphorous trichloride, reaction products with 1,1'-biphenyl and 2,4-bis(1,1-dimethylethyl) phenol	119345-01-6	Phosponite antioxidant as processing stabilizer for plastics
<b>Songnox® DSTDP</b>	Songwon Ind.	Distearyl thiodipropionate	693-36-7	Sulphur containing antioxidant as long term heat stabilizer for plastics
<b>Songnox® DLTDP</b>	Songwon Ind.	Dilauryl thiodipropionate	123-28-4	
<b>Songnox® DTDP</b>	Songwon Ind.	Ditridecyl thiodipropionate	10595-72-9	

# UV-Absorbers

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Songsorb® 1000</b>	Songwon Ind.	2-(2'-hydroxy-5'-methylphenyl) benzo-triazole	2440-22-4	Benzotriazole, broad absorbing, physically acting and preventive light stabilizer for plastics
<b>Songsorb® 2340</b>	Songwon Ind.	2-[2-hydroxy-3,5-di(1,1-dimethyl benzyl) phenyl]-2H-benzotriazole	70321-86-7	
<b>Songsorb® 3260</b>	Songwon Ind.	2-(2'-hydroxy-3'-tert-butyl-5'-methylphenyl)-5-chlorobenzo triazole	3896-11-5	
<b>Songsorb® 3270</b>	Songwon Ind.	2-(2'-hydroxy-3',5'-di-tert-butylphenyl)-5-chlorobenzo triazole	3864-99-1	
<b>Songsorb® 3280</b>	Songwon Ind.	2-(2'-hydroxy-3',5'-di-tert-amyl phenyl) benzotriazole	25973-55-1	
<b>Songsorb® 3290</b>	Songwon Ind.	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl) phenol	3147-75-9	
<b>Songsorb® 3600</b>	Songwon Ind.	Bis[2-hydroxy-5-tert-octyl-3-(benzotriazol-2-yl)phenyl] methane	103597-45-1	
<b>Songsorb® 7120</b>	Songwon Ind.	2,4-di-tert-butylphenyl-4'-hydroxy-3',5'- di-tert-butyl benzoate	4221-80-1	Benzoate, physically acting and preventive light stabilizer for plastics
<b>Songsorb® 2908</b>	Songwon Ind.	Hexadecyl-3,5-di-tert-butyl-4-hydroxy-benzoate	67845-93-6	
<b>SaboStab® UV 1</b>	Sabo S.p.A.	Ethyl 4-[[[(methylphenylamino)methylene]amino] benzoate	57834-33-0	Benzophenone, broad absorbing, physically acting and preventive light stabilizer for plastics
<b>Songsorb® 8100</b>	Songwon Ind.	2-hydroxy-4-n-octoxybenzophenone	1843-05-6	
<b>SaboStab® UV 312</b>	Sabo S.p.A.	2-ethyl-2'-ethoxy-oxanilide	23949-66-8	
<b>Songsorb® 1577</b>	Songwon Ind.	2-(4,6-diphenyl-1,3,5-triazin-2-yl)-5-hexyloxy phenol	147315-50-2	Triazine, broad absorbing, physically acting and preventive light stabilizer for plastics
<b>Songsorb® 1164</b>	Songwon Ind.	2-[4,6-bis (2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-(octyloxy) phenol	2725-22-6	

# HALS (Hindered Amine Light Stabilizer)

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Sabostab® UV 26</b>	Sabo S.p.A.	Polyethylene glycol, ether with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol	59535-09-0	HALS (Hindered Amine Light Stabilizer). Radical scavenger for use as light stabilizer for plastics
<b>Sabostab® UV 40</b>	Sabo S.p.A.	1,6-hexanediamine, N,N'-bis(2,2,6,6-tetra methyl-4-piperidinyl)-, polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products with N-butyl-1-butamine and N-butyl-2,2,6,6-tetramethyl-4-piperidinamine	192268-64-7	
<b>Sabostab® UV 62</b>	Sabo S.p.A.	Butanedioic acid, 1,4-dimethyl ester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol	65447-77-0	
<b>Sabostab® UV 65</b>	Sabo S.p.A.	Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7 + 82919-37-7	
<b>Sabostab® UV 70</b>	Sabo S.p.A.	Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	
<b>Sabostab® UV 78</b>	Sabo S.p.A.	1:1 mixture of Sabostab UV 62 with Sabostab UV 94	65447-77-0 + 71878-19-8	
<b>Sabostab® UV 91</b>	Sabo S.p.A.	Fatty acids, C <sub>12</sub> -C <sub>21</sub> and C <sub>18</sub> unsaturated, 2,2,6,6-tetramethyl-4-piperidinyl esters	86403-32-9 (EU) 167078-06-0 (non EU)	
<b>Sabostab® UV 91 50PP</b>	Sabo S.p.A.	Fatty acids, C <sub>12</sub> -C <sub>21</sub> and C <sub>18</sub> unsaturated, 2,2,6,6-tetramethyl-4-piperidinyl esters compounded in Polypropylene (1:1)	86403-32-9 (EU) 167078-06-0 (non EU) + 9003-07-0	
<b>Sabostab® UV 94</b>	Sabo S.p.A.	1,6-hexanediamine, N,N'-bis(2,2,6,6-tetramethyl-4-piperidinyl), polymer with 2,4,6-trichloro-1,3,5-triazine, reaction product with 2,4,4-trimethyl-2-pentaneamine	71878-19-8 (EU), 70624-18-9 (USA)	
<b>Sabostab® UV 119</b>	Sabo S.p.A.	N,N',N'',N'''-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl) amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine	106990-43-6	
<b>Sabostab® UV 228 50PP</b>	Sabo S.p.A.	Concentrate of 50% light stabilizers (combination) in PP		Blend

## Antistats

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Sabostat® AL 100</b>	Sabo S.p.A.	Ethanol, 2,2'-iminobis-, N-coco alkyl derivatives	61791-31-9	Ethoxylated alkylamine antistats for plastics
<b>Sabostat® ASE 3</b>	Sabo S.p.A.	Ethanol, 2,2'-iminobis-, N-tallow alkyl derivatives	61791-44-4	
<b>Sabostat® ASE 6</b>	Sabo S.p.A.	Ethanol, 2,2'-iminobis-, N-C <sub>14</sub> -C <sub>18</sub> alkyl derivatives	90367-28-5 (EU) 71786-60-2 (US,CAN,JP)	
<b>Sabostat® ASE</b>	Sabo S.p.A.	2,2'-(octadecylimino)bisethanol	10213-78-2	
<b>Sabostat® DELA</b>	Sabo S.p.A.	N,N-bis(2-hydroxyethyl)-dodecaneamide	120-40-1	LDN (lauryl diethanolamide) antistat for plastics
<b>Sabostat® A 300</b>	Sabo S.p.A.	2-[(2-hydroxyethyl)- octadecylamino] ethyl stearate	52497-24-2	Antistat for plastics on the basis of stearyl diethanol amine mono-stearate
<b>Sabostat® MOE</b>	Sabo S.p.A.	Sorbitan, mono-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivatives	9005-65-6	Polyoxyethylated sorbitanmono-oleate as antistat and antifog for plastics
<b>Sabostat® MLE</b>	Sabo S.p.A.	Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives	9005-64-5	Polyoxyethylated sorbitolmonolaurate as antistat and antifog for plastics

## Antifog

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Sabofog® ML</b>	Sabo S.p.A.	Sorbitan monolaurate	1338-39-2	Sorbitan esters as antifog for plastics
<b>Sabofog® MS P</b>	Sabo S.p.A.	Sorbitan monostearate	1338-41-6	
<b>Sabofog® TOE</b>	Sabo S.p.A.	Sorbitan trioleate	9005-70-3	
<b>Sabofog® F1</b>	Sabo S.p.A.	(Octadecylimino)diethylenedi stearate; 2-[(2-hydroxyethyl) octadecylamino] ethylstearate; 2,2'-(octadecylimino) bisethanol	94945-28-5, 52497-24-2, 10213-78-2	Ethoxylated alkylamineesters as antifog for plastics
<b>Sabofog® M1</b>	Sabo S.p.A.	Polyethoxy perfluorohexyl ethanol	52550-44-4	Antimist additive for agricultural films, preferably combined with antifog
<b>Sabofog® PGS</b>	Sabo S.p.A.	Mixture of tetraglyceryl monostearate and polyglyceryl-4-stearate	68004-11-5 + 26855-44-7	Polyglycerylestes as antifog for plastics
<b>Sabofog® PGL</b>	Sabo S.p.A.	1,2,3-Propanetriol, homopolymer, dodecanoate	74504-64-6	

## Slip & Antiblock Agents

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Innoslip E</b>	Pathwel Co., Ltd.	Erucamide	112-84-5	Processing aid, slip and antiblock agent for plastics
<b>Innoslip O</b>	Pathwel Co., Ltd.	Oleamide	301-02-0	
<b>Innoslip S</b>	Pathwel Co., Ltd.	Stearamide	124-26-5	
<b>Innoslip EBS</b>	Pathwel Co., Ltd.	Ethylenebisstearamide	110-30-5	

## PTFE and Derivatives

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Marzon™ Z-5</b>	PPG Laurel	Agglomerated PTFE	9002-84-0	Next generation PTFE, Additive for lowering wear and friction of polymer surfaces
<b>Marzon™ 110</b>	PPG Laurel	Agglomerated PTFE	9002-84-0	Antidrip agent for combinations with flame retardants in various plastics, such as engineering resins or polyolefins
<b>Thor™ FPz</b>	PPG Laurel	Surface fluorinated Mica	12003-38-2	Combines rheological properties of PTFE with highest dimensional stability and hardness of Mica
<b>Marzon™ Z-1</b>	PPG Laurel	PTFE powder	9002-84-0	Additive for lowering wear and friction of polymer surfaces. Highest temperature stability
<b>Marzon™ Z-3</b>	PPG Laurel			
<b>Marzon™ Z-12</b>	PPG Laurel			
<b>Marzon™ V-1</b>	PPG Laurel	Fluor Polymer		PPA = Polymer Processing Aids
<b>Marzon™ V-2</b>	PPG Laurel			
<b>Marzon™ V-3</b>	PPG Laurel			



## Brominated Flame Retardants

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Firemaster® 2100R</b>	Lanxess	Decabromodiphenyl ethane	84852-53-9	Additive flame retardant for PP, PE, PS, PBT, EPDM, UP, EP a. o. applications
<b>PDBS-80™</b>	Lanxess	Polydibromostyrene	88497-56-7	Polymeric flame retardant for PA, PBT, PET
<b>PHT4™</b>	Lanxess	Tetrabromophthalic anhydride	632-79-1	
<b>PHT4-Diol™</b>	Lanxess	Tetrabromophthalate diol	20566-35-2	Reactive flame retardant for PUR, UP a. o. applications
<b>PHT4-Diol' LV™</b>	Lanxess	Tetrabromophthalate diol	20566-35-2	
<b>BA-59P™</b>	Lanxess	Tetrabromobisphenol A	79-94-7	Reactive and additive flame retardant for EP, PC, PS, ABS a. o. applications
<b>BC-52™</b>	Lanxess	Brominated aromatic carbonate oligomer	94334-64-2	Polymeric flame retardant for PBT, PET, PC, PS, ABS, SAN a. o. applications
<b>BC-58™</b>	Lanxess	Brominated aromatic carbonate oligomer	71342-77-3	Polymeric flame retardant for PBT, PET, PC, PS, ABS, SAN a. o. applications
<b>BDDP of TBBA</b>		Tetrabromobisphenol A bis (2,3-dibromopropyl ether)	21850-44-2	Additive flame retardant for polyolefins

## Phosphorous Flame Retardants

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Emerald Innovation™ NH-1</b>	Lanxess	Proprietary		Liquid flame retardant for PUR, PVC, coatings, adhesives a. o. applications
<b>Reofos® 35</b>	Lanxess		68937-41-7	
<b>Reofos® 50</b>	Lanxess		68937-41-7	
<b>Reofos® 65</b>	Lanxess	Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5 %]	68937-41-7	Flame retardant plasticizer for PVC, phenolic laminates
<b>Reofos® 95</b>	Lanxess		68937-41-7	
<b>BDP</b>		Aromatic polyphosphate	5945-33-5	High molecular liquid flame retardant for PC, PC/ABS, PC/HIPS a. o. applications
<b>BDP LV</b>		Aromatic polyphosphate	5945-33-5	Low viscous version of BDP for application in PUR, EP a.o. resins
<b>RDP</b>		Resorcinol diphosphate	57583-54-7	Liquid flame retardant for PC, PC/ABS, PPO/HIPS a. o. applications
<b>PX-200</b>	Daihachi	Resorcinol-bridged dixylyl phosphate	139189-30-3	High molecular, solid flame retardant for PC, PC/ABS, PC/HIPS and in PUR, Epoxy, Acrylic a. o. resins

## HFFR (Halogen Free Flame Retardants)

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>BLG</b>	RMC Remacon	Expandable graphite	12777-87-6	Inorganic intumescent system for PUR, fire protection and other applications
<b>HT-FLAM IND-01</b>	Prolabin & Tefarm	Mixture of metal hydroxides, nanoscale layer molecules		Halogen-free flame retardant
<b>EPFR-100 A</b>	Presafar	Ammonium polyphosphate (APP) based intumescent system		HFFR for polyolefins with antidripping agent
<b>EPFR-100 D</b>	Presafar		HFFR for polyolefins without antidripping agent	
<b>MCA-15</b>	Presafar	Melamincyanurate	37640-57-6	HFFR for TPE, TPU
<b>MCA-25</b>	Presafar		37640-57-6	HFFR for PA, PBT
<b>MCA-50</b>	Presafar		37640-57-6	HFFR for PA
<b>EPFR-APP- Series</b>	Presafar	High molecular APP with different coatings Carbonyl and acylate modified polyolefins Masterbatch system based on modi- fied polyolefins combined with HFFR		HFFR for intumescent systems
<b>Daiguard 850</b>	Daihachi			New HFFR with highest P content, high heat resistant and special FR mechanism for TPU, PUR, and many other applications in adhesives, paint and coating

## FR Synergists

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>Zinflam® ZHS</b>	SCL Italia	Zinc hydroxystannate	12027-96-2	Alternative to antimonytrioxide, reduction of smoke density, toxicity and heat release rate; flame retardant and synergist for PVC, polyolefines, PUR, UP, EP a. o. applications
<b>Zinflam® ZS</b>	SCL Italia	Zinc stannate	12036-37-2	Alternative to antimonytrioxide, reduction of smoke density, smoke toxicity and heat release rate; flame retardant and synergist for PA, PBT, PP a. o. applications
<b>D-Pyre®</b>	Bioenvision	Polyhedral Oligomer SilSesquioxsanes (POSS)		Synergistic FR with antidripping effect, enables ATO replacement, application in PUR, PVC, PP, UP, VE, EP, a.o.
<b>ATO</b>		Antimonytrioxide	1309-64-4	Smoke Suppressant

## Other Special Additives\*

TRADE NAME	SUPPLIER	CHEMICAL NAME	CAS-NO.	CLASSIFICATION & APPLICATION
<b>INDOPOL®</b>	Ineos	Polybutene/PIB	9003-29-6	Plasticizer and tackifier
<b>Cellcom®</b>	Kumyang	Blowing Agents	div.	Exothermic, endothermic and modified blowing agents systems
<b>GNP, GP</b>	RMC Remacon	Natural and synthetic graphites	7782-42-5	Graphites for thermal and electrical conductivity
<b>THEIC</b>		Tris (2-hydroxyethyl) Isocyanurate	839-90-7	PVC Stabilizer

\*Selection; further information on special additives are available on request



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