



Gp

Green Polymer
Additives

Additives for PVC Processing

– Extrusion –

CREATING VALUE for tomorrow, through all that we do today

From basics to semi-specialty and specialty chemicals, Emery Oleochemicals is dedicated to providing customers with best-in-class solutions through continuous product development and stringent quality standards. Derived from renewable resources, our products are predominantly made from natural oils and fats such as palm kernel oil and tallow. We pride ourselves on having a diverse portfolio of oleochemical products suited for a broad range of applications.

Our portfolio includes renewable solutions for the Agro Green, Bio-Lubricants, Green Polymer Additives, Home and Personal Wellness and OleoBasics markets.

Leading product innovation naturally

We are committed to CREATING VALUE for you with our combined strengths in global manufacturing footprint, research and development, distribution, marketing and technical know-how. Uniquely packaged, our competitive advantage enables us to offer you innovative and competitive solutions designed to meet your needs.

Guided by an inventive spirit that goes beyond providing high-performance solutions, we are able to help your business deal with the challenges of a market that is going greener by the day. This makes us your preferred natural-based chemical solutions partner.



Designing natural-based solutions in polymers for a better tomorrow

For over 60 years, we have been recognized as a leading innovator of a broad range of polymer additives with our high-performance natural-based chemical brands, LOXIOL® and EDENOL®. For having successfully improved our customers' product performance and processing efficiencies, our solutions today can be found in growth markets such as housing and construction, automotive, packaging and electronics. Our products are also known to enhance the quality of items for everyday life including toys and sporting equipment.

As your preferred partner with leading technical expertise, we offer customized solutions based on product groups such as lubricants, plasticizer and viscosity depressants, anti-static and anti-fogging agents, release agents, surfactants, green polyols and specialty fatty acids.

We remain committed to delivering the highest in quality standards and innovative solutions while building a sustainable tomorrow in polymers.



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■ WINDOW PROFILE

Product	Function	Chemistry	Delivery Form	Melting Range (°C)	Dosage (phr)
LOXIOL® G 59	Lubricant, internal	Ester wax	solid	68-72	0.5-3.0
LOXIOL® G 60	Lubricant, internal	Dicarboxylic acid ester	solid	44-47	0.5-3.0
LOXIOL® G 62	Lubricant, internal	Fatty acid ester	solid	50-55	0.5-1.5
LOXIOL® G 63	Lubricant, internal	Fatty acid ester	solid	50-55	0.5-1.5
LOXIOL® EP 3500	Lubricant, internal + external	Ca-stearate	solid	150-170	0.2-0.5
LOXIOL® G 32	Lubricant, internal + external	Wax ester	solid	52-56	0.5-1.5
LOXIOL® G 34 R	Lubricant, internal + external	Ester wax	solid	53-58	0.5-1.5
LOXIOL® 2050	Lubricant, external	Paraffin wax	solid	104-110	0.1-0.5
LOXIOL® 2899	Lubricant, external	Polyol ester	solid	70-80	0.3-0.8
LOXIOL® VPG 2571	Lubricant, external	Fatty ester ester of polyol	solid	75-80	0.3-0.8
LOXIOL® VPN 960	Lubricant, external	Fatty acid ester of polyol	solid	62-68	0.2-1.0
LOXIOL® VPN 963	Lubricant, external	Combination lubricant	solid	80-90	0.1-0.5
LOXIOL® G 24	Lubricant, external	Polyol ester	solid	50-55	0.3-0.8
LOXIOL® G 20	Lubricant, external	Fatty acid	solid	54-56	0.1-0.5
LOXIOL® G 21 H	Lubricant, external	Fatty acid	solid	71-80	0.1-0.5
LOXIOL® GE 2063	Lubricant, external	Lubricant with co-stabilizing effect	solid	90-160	1.7-2.5
LOXIOL® P 1508	Lubricant, external	PE wax	solid	90-140	0.05-0.2
LOXIOL® 80 X	Antistatic Agent	Mixture of anionic and non-ionic compounds	liquid	-	0.2-2.0
LOXIOL® VPA 1726	Antistatic Agent	Polyol partial ester	liquid	-	0.5-3.0
LOXIOL® 93 P	Antistatic Agent	Anionic compound	solid	-	0.2-1.0

GUIDE FORMULATIONS

Formulation: Pb stabilized	Dosage (phr)
S-PVC, k-value 68 *	100
Impact Modifier *	7.0
Coated CaCO3	6.0
TiO2	4.0-6.0
Flow Modifier	0.5-1.0
Di basic lead phosphite	2.5-3.5
Pb-stearate	0.5-1.0
Costabilizer, org. phosphite	0.2-0.4
Antioxidant	0.1
LOXIOL® EP 3500	0.4-0.8
LOXIOL® G 60 / G 62 / G 63	0.4-0.7
LOXIOL® G 32 / G 34 R	0.4-0.6
LOXIOL® G 21 H	0.1
LOXIOL® 2899	0.1
LOXIOL® P 1508	0.1
Pigment	X

Formulation: CaZn stabilized	Dosage (phr)
S-PVC, k-value 68 *	100
Impact Modifier *	7.0
Coated CaCO3	6.0
TiO2	4.0-6.0
Flow Modifier	0.5-1.0
Zn-soaps	0.5-0.7
LOXIOL® EP 3500	0.3-0.5
Costabilizer	0.5-0.8
Antioxidants	0.1
Hydrotalcite	0.6-0.8
LOXIOL® G 60 / G 62 / G 63	0.3-0.6
LOXIOL® G 32 / G 34 R	0.3-0.6
LOXIOL® G 21 H	0.2
LOXIOL® P 1508	0.05
Pigment	X

Formulation: Sn stabilized	Dosage (phr)
S-PVC, k-value 68 *	100
Impact Modifier *	6.0-10.0
Coated CaCO3	4.0-10.0
TiO2	8.0-10.0
Flow Modifier	0.5-1.0
Methyl tin mercaptide	1.5-2.0
LOXIOL® EP 3500	0.15-0.3
LOXIOL® GE 2063	1.0-2.0
LOXIOL® G 60 / G 62 / G 63	0.3-0.6
LOXIOL® G 21 H	0.1-0.2

* alternative: Copolymer

■ GENERAL PURPOSE PROFILE

Product	Function	Chemistry	Delivery Form	Melting Range (°C)	Dosage (phr)
LOXIOLO® G 59	Lubricant, internal	Ester wax	solid	68-72	0.5-3.0
LOXIOLO® G 60	Lubricant, internal	Dicarboxylic acid ester	solid	44-47	0.5-3.0
LOXIOLO® G 62	Lubricant, internal	Fatty acid ester	solid	50-55	0.5-1.5
LOXIOLO® G 63	Lubricant, internal	Fatty acid ester	solid	50-55	0.5-1.5
LOXIOLO® G 72	Lubricant, internal	High molecular weight poly ester	solid	43-47	0.3-1.0
LOXIOLO® GH 4	Lubricant, internal	Combination lubricant	solid	76-81	0.8-1.5
LOXIOLO® P 728	Lubricant, internal	Polyol partial ester	solid	49-52	0.5-1.5
LOXIOLO® EP 3500	Lubricant, internal + external	Ca-stearate	solid	150-170	0.2-0.5
LOXIOLO® G 32	Lubricant, internal + external	Wax ester	solid	52-56	0.5-1.5
LOXIOLO® G 34 R	Lubricant, internal + external	Ester wax	solid	53-58	0.5-1.5
LOXIOLO® P 1404	Lubricant, internal + external	Combination lubricant	solid	88-95	0.5-2.0
LOXIOLO® 2050	Lubricant, external	Paraffin wax	solid	104-110	0.1-0.5
LOXIOLO® 2899	Lubricant, external	Polyol ester	solid	70-80	0.3-0.8
LOXIOLO® VPG 2571	Lubricant, external	Fatty ester ester of polyol	solid	75-80	0.3-0.8
LOXIOLO® VPN 960	Lubricant, external	Fatty acid ester of polyol	solid	62-68	0.2-1.0
LOXIOLO® VPN 963	Lubricant, external	Combination lubricant	solid	80-90	0.1-0.5
LOXIOLO® G 24	Lubricant, external	Polyol ester	solid	50-55	0.3-0.8
LOXIOLO® G 20	Lubricant, external	Fatty acid	solid	54-56	0.1-0.5
LOXIOLO® G 21 H	Lubricant, external	Fatty acid	solid	71-80	0.1-0.5
LOXIOLO® P 1508	Lubricant, external	PE wax	solid	90-140	0.05-0.2
LOXIOLO® G 72	Release Agent	High molecular weight poly ester	solid	43-47	0.3-1.0
LOXIOLO® 80 X	Antistatic Agent	Mixture of anionic and non-ionic compounds	liquid	-	0.2-2.0
LOXIOLO® VPA 1726	Antistatic Agent	Polyol partial ester	liquid	-	0.5-3.0
LOXIOLO® 93 P	Antistatic Agent	Anionic compound	solid	-	0.2-1.0

GUIDE FORMULATIONS

Formulation: CaZn stabilized	Processing of Dryblend on Twin-Screw	Processing of Dryblend on Single-Screw
	Dosage (phr)	
S-PVC, k-value 60-68	100	100
Coated CaCO3	5.0-15.0	5.0-15.0
Impact Modifier	0-5.0	0-5.0
Flow Modifier	0-1.5	0-1.5
CaZn-Stabilizer	3.0	3.0
LOXIOLO® G 32 / G 34 R	0.8	1.0
LOXIOLO® G 21 H	0.2	0.2
LOXIOLO® G 20 / 2050	0-0.15	0.2
TiO2	X	X
Color correction	X	X

Formulation: Pb stabilized (outdoor)	Processing of Dryblend on Twin-Screw
	Dosage (phr)
S-PVC, k-value 65-68	100
Coated CaCO3	5.0-15.0
Impact Modifier	0-5.0
Flow Modifier	0-1.5
Bas. Pb-phosphite	3.0
Bas. Pb-sulfate	1.0
Pb-stearate	0.8
LOXIOLO® EP 3500	0.5
LOXIOLO® G 32 / G 34 R	0.5-1.0
LOXIOLO® G 60 / G 62 / G 63	0.5-1.0
LOXIOLO® G 20 / 2050	0-0.2
TiO2	X
Color correction	X

Remarks

For formulations based on granules and also with thin-walled profiles it is useful to increase the dosage of LOXIOLO® G 32 / G 34 R and also LOXIOLO® G 60. Using High Impact Modifier like EVA, CPE or Acrylate an increase of external lubrication can be necessary.

Formulation: Sn stabilized (crystal-clear)	Processing of Dryblend on Twin-Screw
	Dosage (phr)
S-PVC, k-value 60-68	100
Impact Modifier	X
Flow Modifier	0-1.5
LOXIOLO® GH 4	1.0-1.5
LOXIOLO® G 72	0.5-0.8
Tin stabilizer	1.5
LOXIOLO® EP 3500	0.2
LOXIOLO® G 20 / 2050	0-0.2
Color correction	X

Remarks

For formulations based on granules it is useful to increase the dosage of LOXIOLO® G 72.

■ FOAMED PROFILE / SHEET

Product	Function	Chemistry	Delivery Form	Melting Range (°C)	Dosage (phr)
LOXIOL® G 59	Lubricant, internal	Ester wax	solid	68-72	0.5-3.0
LOXIOL® G 60	Lubricant, internal	Dicarboxylic acid ester	solid	44-47	0.5-3.0
LOXIOL® P 728	Lubricant, internal	Polyol partial ester	solid	49-52	0.5-1.5
LOXIOL® G 62	Lubricant, internal	Fatty acid ester	solid	50-55	0.5-1.5
LOXIOL® G 63	Lubricant, internal	Fatty acid ester	solid	50-55	0.5-1.5
LOXIOL® EP 3500	Lubricant, internal + external	Ca-stearate	solid	150-170	0.2-0.5
LOXIOL® G 32	Lubricant, internal + external	Wax ester	solid	52-56	0.5-1.5
LOXIOL® G 34 R	Lubricant, internal + external	Ester wax	solid	53-58	0.5-1.5
LOXIOL® 2050	Lubricant, external	Paraffin wax	solid	104-110	0.1-0.5
LOXIOL® 2899	Lubricant, external	Polyol ester	solid	70-80	0.3-0.8
LOXIOL® VPG 2571	Lubricant, external	Fatty ester ester of polyol	solid	75-80	0.3-0.8
LOXIOL® VPN 960	Lubricant, external	Fatty acid ester of polyol	solid	62-68	0.2-1.0
LOXIOL® VPN 963	Lubricant, external	Combination lubricant	solid	80-90	0.1-0.5
LOXIOL® G 24	Lubricant, external	Polyol ester	solid	50-55	0.3-0.8
LOXIOL® G 20	Lubricant, external	Fatty acid	solid	54-56	0.1-0.5
LOXIOL® G 21 H	Lubricant, external	Fatty acid	solid	71-80	0.1-0.5
LOXIOL® GE 2063	Lubricant, external	Lubricant with co-stabilizing effect	solid	90-160	1.7-2.5
LOXIOL® P 1508	Lubricant, external	PE wax	solid	90-140	0.05-0.2
LOXIOL® VPG 1781	Lubricant, external	Combination lubricant	solid	90-100	0.8-1.2
EDENOL® D 81	Plasticizer, stabilising properties	Epoxidised soya bean oil	liquid	-	1.0-1.5
LOXIOL® 80 X	Antistatic Agent	Mixture of anionic and non-ionic compounds	liquid	-	0.2-2.0
LOXIOL® VPA 1726	Antistatic Agent	Polyol partial ester	liquid	-	0.5-3.0
LOXIOL® 93 P	Antistatic Agent	Anionic compound	solid	-	0.2-1.0

GUIDE FORMULATIONS

Formulation	CELUKA		FREE FOAM			
	Profile	Sheet	Profile		Sheet	
	CaZn	CaZn	CaZn	Sn	Sn	CaZn
	Dosage (phr)	Dosage (phr)	Dosage (phr)	Dosage (phr)	Dosage (phr)	Dosage (phr)
S- / M-PVC (K value 58)	100	100	100	100	100	100
Processing aid	5.0-6.0	5.0-8.0	5.0	5.0	8.0	8.0
Stabilizer	3.0-4.0	4.0-5.0	4.0-5.0	1.5	1.8	4.0
LOXIOL® EP 3500				0.5	0.4	0.4
LOXIOL® VPG 1781	0.2	0.2				1.0
Ox. PE wax			0.1	0.2	0.2	0.1
LOXIOL® GE 2063				1.5	2.0	
LOXIOL® G 60 / G 62 / G 63	0.6	1.0		0.5	0.5	0.8
LOXIOL® 2050	0.2					
Coated CaCO3	4.0	4.0	6.0	6.0	4.0	4.0
TiO2	2.0-4.0	4.0-5.0	2.0-4.0	2.0-6.0	4.0-6.0	2.0-4.0
Foaming agent	0.5	0.5	0.5	0.5	0.6	0.6
Organic phosphite	0.3	0.3	0.3			0.3
EDENOL® D 81				1	1	1

■ PIPE

Product	Function	Chemistry	Delivery Form	Melting Range (°C)	Dosage (phr)
LOXIOL® G 12-40 / LOXIOL® G 12-40 V	Lubricant, internal	Glycerol partial ester	solid	55 -61	0.5-1.5
LOXIOL® G 59	Lubricant, internal	Ester wax	solid	68-72	0.5-3.0
LOXIOL® G 60	Lubricant, internal	Dicarboxylic acid ester	solid	44-47	0.5-3.0
LOXIOL® G 62	Lubricant, internal	Fatty acid ester	solid	50-55	0.5-1.5
LOXIOL® G 63	Lubricant, internal	Fatty acid ester	solid	50-55	0.5-1.5
LOXIOL® P 728	Lubricant, internal	Polyol partial ester	solid	49-52	0.5-1.5
LOXIOL® EP 3500	Lubricant, internal + external	Ca-stearate	solid	150-170	0.2-0.5
LOXIOL® G 32	Lubricant, internal + external	Wax ester	solid	52-56	0.5-1.5
LOXIOL® G 34 R	Lubricant, internal + external	Ester wax	solid	53-58	0.5-1.5
LOXIOL® 2050	Lubricant, external	Paraffin wax	solid	104-110	0.1-0.5
LOXIOL® 2899	Lubricant, external	Polyol ester	solid	70-80	0.3-0.8
LOXIOL® VPG 2571	Lubricant, external	Fatty ester ester of polyol	solid	75-80	0.3-0.8
LOXIOL® VPN 960	Lubricant, external	Fatty ester ester of polyol	solid	62-68	0.2-1.0
LOXIOL® VPN 963	Lubricant, external	Combination lubricant	solid	80-90	0.1-0.5
LOXIOL® G 24	Lubricant, external	Polyol ester	solid	50-55	0.3-0.8
LOXIOL® G 20	Lubricant, external	Fatty acid	solid	54-56	0.1-0.5
LOXIOL® G 21 H	Lubricant, external	Fatty acid	solid	71-80	0.1-0.5
LOXIOL® G 47	Lubricant, external	Wax ester	solid	60-64	0.3-1.0
LOXIOL® P 1508	Lubricant, external	PE wax	solid	90-140	0.05-0.2
LOXIOL® 80 X	Antistatic Agent	Mixture of anionic and non-ionic compounds	liquid	-	0.2-2.0
LOXIOL® VPA 1726	Antistatic Agent	Polyol partial ester	liquid	-	0.5-3.0
LOXIOL® 93 P	Antistatic Agent	Anionic compound	solid	-	0.2-1.0

GUIDE FORMULATIONS

Drinking Water Pipe	
Formulation: CaZn stabilized	Dosage (phr)
S-PVC, k-value 66-68	100
CaCO3	1.0-5.0
CaZn-Stabilizer	2.6-3.0
LOXIOL® 2050	0.1-0.25
LOXIOL® P 1508	0-0.1
Pigment	X

Drainage Pipe	
Formulation: Pb stabilized	Dosage (phr)
S-PVC, k-value 68	100
CaCO3	5.0-20.0
Flow Modifier	0-1
Impact Modifier	0-4
Tribasic Pb-sulfate	1.2-1.5
Pb-stearate (28%)	1.0-1.2
LOXIOL® EP 3500	0.4-0.5
LOXIOL® G 20	0.4-0.6
LOXIOL® 2050	0.1-0.2
LOXIOL® 2899 / EP 8578	0.3-0.5

Waste Water Pipe	
Formulation: Pb stabilized	Dosage (phr)
S-PVC, k-value 68	100
CaCO3	5.0-20.0
Tribasic Pb-sulfate	0.4-0.6
Pb-stearate (28%)	0.5-0.7
LOXIOL® EP 3500	0.1-0.2
LOXIOL® G 20	0.2-0.3
LOXIOL® 2050	0.1-0.2
LOXIOL® 2899	0.1-0.2
Pigment	X

Product	Function	Chemistry	Delivery Form	Melting Range (°C)	Dosage (phr)
LOXIOLO® G 40	Lubricant, internal	Wax ester	liquid	<7*	0.2-1.5
LOXIOLO® G 71 S	Lubricant, external	High molecular weight poly ester	liquid	<-20*	0.2-1.0
LOXIOLO® G 20	Lubricant, external	Fatty acid	solid	54-56	0.1-0.5
LOXIOLO® G 21 H	Lubricant, external	Fatty acid	solid	71-80	0.1-0.5
LOXIOLO® G 71 S	Release Agent	High molecular weight poly ester	liquid	<-20*	0.2-1.0
LOXIOLO® EBS SPEZ P	Release Agent	Ethylene-bis-stearamide	solid	141-147	0.2-0.4
EDENOL® T810T STAB	Plasticizer, high temperature	Trimellitate ester	liquid	-	30-80
EDENOL® TOTM	Plasticizer, high temperature	Trimellitate ester	liquid	-	30-80
EDENOL® 888	Plasticizer, low temperature	Sebacate ester	liquid	-	30-80
EDENOL® DBS	Plasticizer, low temperature	Sebacate ester	liquid	-	30-80
EDENOL® 1200	Plasticizer, oil & solvent resistant	Polymeric plasticizer based on adipic acid	liquid	-	30-80
EDENOL® 1215	Plasticizer, oil & solvent resistant	Polymeric plasticizer based on adipic acid	liquid	-	30-80
EDENOL® 1234	Plasticizer, oil & solvent resistant	Polymeric plasticizer based on adipic acid	liquid	-	30-80
EDENOL® 190	Plasticizer, secondary	Fatty acid ester	liquid		max. 10
EDENOL® D 81	Plasticizer, stabilising properties	Epoxidised soya bean oil	liquid	-	1.0-1.5
LOXIOLO® 3366	Antistatic Agent	Polyol partial ester	liquid	-	0.5-3.0
LOXIOLO® 3380	Antistatic Agent	Mixture based on polyglycol ester	liquid	-	0.5-3.0
LOXIOLO® 80 X	Antistatic Agent	Mixture of anionic and non-ionic compounds	liquid	-	0.2-2.0

* = pour point

Refrigerator Gasket	
Formulation: white	Dosage (phr)
S-PVC, k-value 70	100
EDENOL® D 81	75
CaZn stabilizer	1.5
Ca-carbonate filler	70
TiO2	3.0
Formulation: brown	Dosage (phr)
S-PVC, k-value 70	100
EDENOL® D 81	45
EDENOL® 1200 / 1215	35
CaZn stabilizer	1.5
Ca-carbonate filler	70
Brown pigment	1.0

Wire Fencing	
Formulation	Dosage (phr)
S-PVC, k-value 70	100
CaCO3	5.0
DOA	35.0
EDENOL® D 81	5.0
CaZn-Stabilizer	2.0
Organic phosphite	1.0
LOXIOLO® G 71 S	0.1-0.3
LOXIOLO® G 40	1
Pigment, green	X

Hose	
Formulation: pigmented articles	Dosage (phr)
S-PVC, k-value 70	100
CaCO3	X
DOA or DOP, DINP, EDENOL® DBS / EDENOL® 888	40.0-60.0
EDENOL® D 81	3.0
CaZn-Stabilizer	2.0
LOXIOLO® G 71 S	0.1-0.3
Pigment	X

Flooring	
Formulation	Dosage (phr)
S-PVC, k-value 70	100
CaCO3	80.0
DOA or DOP, DINP and EDENOL® 190	30.0-40.0
EDENOL® D 81	3.0
CaZn-Stabilizer	2.0
LOXIOLO® G 71 S	0.1-0.3
Pigment	X

Profile for Construction, Automotive, etc.	
Formulation: pigmented articles	Dosage (phr)
S-PVC, k-value 70	100
CaCO3	X
EDENOL® TOTM / EDENOL® T810T STAB	30-60
EDENOL® D 81	3.0
CaZn-Stabilizer	2.0
LOXIOLO® G 71 S	0.1-0.3
Pigment	X

Transparent Articles	
Formulation	Dosage (phr)
S-PVC, k-value 70	100
DOA or DOP, DINP, EDENOL® DBS / EDENOL® 888	50
EDENOL® D 81	6.0
CaZn stabilizer	0.6
LOXIOLO® G 71 S	0.1-0.3
Pigment, blue	0.002
Pigment	X

■ BLOWN FILM (E.G. FOOD / MEAT WRAP FILM, SHRINK FILM)

Product	Function	Chemistry	Delivery Form	Melting Range (°C)	Dosage (phr)
LOXIOL® G 10 V	Lubricant, internal	Glycerol partial ester	liquid	<0*	0.5-2.5
LOXIOL® G 71 S	Lubricant, external	High molecular weight poly ester	liquid	<-20*	0.2-1.0
LOXIOL® G 78	Lubricant, external	Combination lubricant	solid	105-115	0.3-1.2
LOXIOL® G 78 V	Lubricant, external	Combination lubricant	solid	100-110	0.3-1.2
LOXIOL® G 71 S	Release Agent	High molecular weight poly ester	liquid	<-20*	0.2-1.0
LOXIOL® EBS SPEZ P	Release Agent	Ethylene-bis-stearamide	solid	141-147	0.2-0.4
LOXIOL® G 78	Release Agent	Combination lubricant	solid	105-115	0.3-1.2
LOXIOL® G 78 V	Release Agent	Combination lubricant	solid	100-110	0.3-1.2
EDENOL® 1200	Plasticizer, oil & solvent resistant	Polymeric plasticizer based on adipic acid	liquid	-	30-80
EDENOL® 1215	Plasticizer, oil & solvent resistant	Polymeric plasticizer based on adipic acid	liquid	-	30-80
EDENOL® 1234	Plasticizer, oil & solvent resistant	Polymeric plasticizer based on adipic acid	liquid	-	30-80
EDENOL® D 81	Plasticizer, stabilising properties	Epoxidised soya bean oil	liquid	-	-
EDENOL® D 82 S	Plasticizer, stabilising properties	Epoxidised soya bean oil	liquid	-	-
LOXIOL® A 4	Antifogging Agent	Fatty acid ester compound	liquid		2.5-4.0
LOXIOL® A 2	Antifogging Agent	Fatty acid ester compound	liquid	-	2.0-4.0
LOXIOL® A 4 SPEZIAL	Antifogging Agent	Fatty acid ester compound	liquid	-	2.5-4.0

* = pour point

GUIDE FORMULATIONS

Blown Film	
Formulation: standard	Dosage (phr)
S-PVC, k-value 70	100
EDENOL® 1200 / 1215 / 1234 + monomeric plasticizer	25
EDENOL® D 82 S	10
CaZn stabilizer	0.8
LOXIOL® A2 / A 4 / A 4 SPEZIAL	2.5-4.0
LOXIOL® G 78 / G 78 V or LOXIOL® G 71 S / PE-wax	0.3
Formulation: Lower k-value or Higher Amount of ESBO	Dosage (phr)
S-PVC, k-value 60-65	100
EDENOL® 1200 / 1215 / 1234 + monomeric plasticizer	25
EDENOL® D 82 S	10-16
CaZn stabilizer	0.4
LOXIOL® A2 / A 4 / A 4 SPEZIAL	2.5-4.0
LOXIOL® G 78 / G 78 V or LOXIOL® G 71 S / PE-wax	0.3
Formulation: Semi Rigid Shrink Film	Dosage (phr)
S-PVC, k-value 65	100
DOA / EDENOL® 1215	6.0
EDENOL® D 82 S	16
CaZn stabilizer	1.8
LOXIOL® A2 / A 4 / A 4 SPEZIAL	2.5-4.0
LOXIOL® G 78 / G 78 V or LOXIOL® G 71 S / PE-wax	0.3

Product	Function	Chemistry	Delivery Form	Melting Range (°C)	Dosage (phr)
LOXIOLO® G 13	Lubricant, internal	Fatty acid ester of polyol	liquid	<-10*	0.5-1.5
LOXIOLO® G 40	Lubricant, internal	Wax ester	liquid	<7*	0.2-1.5
LOXIOLO® EP 3500	Lubricant, internal + external	Ca-stearate	solid	150-170	0.2-0.5
LOXIOLO® G 20	Lubricant, external	Fatty acid	solid	54-56	0.1-0.5
LOXIOLO® G 21 H	Lubricant, external	Fatty acid	solid	71-80	0.1-0.5
LOXIOLO® G 71 S	Lubricant, external	High molecular weight poly ester	liquid	<-20*	0.2-1.0
LOXIOLO® P 1508	Lubricant, external	PE wax	solid	90-140	0.05-0.2
EDENOL® T810T STAB	Plasticizer, high temperature	Trimellitate ester	liquid	-	30-80
EDENOL® TOTM	Plasticizer, high temperature	Trimellitate ester	liquid	-	30-80
EDENOL® 888	Plasticizer, low temperature	Sebacate ester	liquid	-	max. 50
EDENOL® DOZ	Plasticizer, low temperature	Azelaic ester	liquid	-	max. 45
EDENOL® DIDA	Plasticizer, low temperature	Adipate ester	liquid	-	max. 50
EDENOL® 196	Plasticizer, high temperature	Diester	liquid	-	30-80
EDENOL® D 81	Plasticizer, stabilising properties	Epoxidised soya bean oil	liquid	-	-

* = pour point

Cable		
Formulation: CaZn stabilized, Temperature: 70-90 °C	"Sheathing" Dosage (phr)	"Insulation" Dosage (phr)
S-PVC, k-value 70	100	100
DIDP	40-60	40-60
CaCO3	40-80	40-60
LOXIOLO® EP 3500	0.3-0.5	0.3-0.5
Flame retardant	X	X
Pigment	X	X
CaZn stabilizer	3-6	3-6
Formulation: CaZn stabilized, Temperature: 105-125 °C / HT Application	"Sheathing" Dosage (phr)	"Insulation" Dosage (phr)
S-PVC, k-value 70	100	100
EDENOL® T810T STAB	30-60	30-60
EDENOL® D 81	0-5	0-5
LOXIOLO® EP 3500	0.3-0.5	0.3-0.5
CaCO3	0-20	0-20
Kaolin	20-0	20-0
Flame retardant	X	X
Pigment	X	X
CaZn stabilizer	6-15	6-15
Formulation: Communications- / Computer Cable Transparent	Dosage (phr)	
S-PVC, k-value 70	100	
EDENOL® D 81	3-4	
DINP	40-80	
LOXIOLO® G 71 S	0.2	
LOXIOLO® G 40	0.4	
Pigment	X	
Liquid BaZn or CaZn stabilizer	1.5-3.0	

■ OVERVIEW: INTERNAL & EXTERNAL LUBRICATING EFFECT

LOXIOL®	Internal	External	Transparent Article	Melting Range (°C)	Dosage (%)	Chemistry
G 20		■ ■	●	54-56	0.1-0.5	Fatty acid
G 21 H		■	●	71-80	0.1-0.5	
2050		■ ■ ■ ■ ■ ■ ■ ■		104-110	0.1-0.5	Paraffin wax
P 1508		■ ■ ■ ■ ■ ■		90-140	0.05-0.2	PE wax
G 40	■ ■ ■ ■ ■ ■ ■ ■		●	< 7 *	0.2-1.5	Wax ester
G 41	■ ■ ■ ■ ■ ■	■		69-77	0.5-1.5	
G 30	■ ■ ■ ■ ■ ■ ■ ■	■ ■		46-49	0.5-1.5	
G 32	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■		52-56	0.5-1.5	
G 47	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■		60-64	0.3-1.0	
G 60	■ ■ ■ ■ ■ ■ ■ ■		●	44-47	0.5-3.0	
G 10 V	■ ■ ■ ■ ■ ■ ■ ■		●	< 0 *	0.5-2.5	Polyol ester
G 11	■ ■ ■ ■ ■ ■ ■ ■		●	< -10 *	0.5-1.5	
G 12-40 / G 12-40 V	■ ■ ■ ■ ■ ■ ■ ■			55-62	0.5-1.5	
G 12	■ ■ ■ ■ ■ ■ ■ ■			55-62	0.2-1.5	
EP 55	■ ■ ■ ■ ■ ■ ■ ■			55-62	0.2-1.5	
G 13	■ ■ ■ ■ ■ ■ ■ ■		●	< -10 *	0.5-1.5	
G 15 PULVER	■ ■ ■ ■ ■ ■ ■ ■		●	83-90	0.5-2.5	
G 16	■ ■ ■ ■ ■ ■ ■ ■		●	< 0 *	0.5-1.5	
G 59	■ ■ ■ ■ ■ ■ ■ ■		●	68-72	0.5-3.0	
G 62	■ ■ ■ ■ ■ ■ ■ ■			50-55	0.5-1.5	
G 63	■ ■ ■ ■ ■ ■ ■ ■			50-55	0.5-2.0	
P 1141	■ ■ ■ ■ ■ ■ ■ ■		●	< 0 *	0.5-1.5	
P 1206	■ ■ ■ ■ ■ ■ ■ ■		●	53-56	0.5-1.5	
3366	■ ■ ■ ■ ■ ■ ■ ■		●	< 0 **	0.5-4.0	
A 4	■ ■ ■ ■ ■ ■ ■ ■		●	< 0 **	2.0-4.0	
P 728	■ ■ ■ ■ ■ ■ ■ ■	■	●	49-52	0.5-1.5	
G 24		■ ■ ■ ■ ■ ■ ■ ■		50-55	0.3-0.8	
2899		■ ■ ■ ■ ■ ■ ■ ■		70-80	0.3-0.8	
G 53	■ ■ ■ ■ ■ ■ ■ ■		●	49-54	0.5-1.5	Fatty alcohol

LOXIOL®	Internal	External	Transparent Article	Melting Range (°C)	Dosage (%)	Chemistry
GH 4	■ ■ ■ ■ ■ ■ ■ ■		●	76-81	0.8-1.5	Combination lubricant
3591	■ ■ ■ ■ ■ ■ ■ ■			100-108	0.2-1.5	
1820	■ ■ ■ ■ ■ ■ ■ ■	■ ■		122-126	0.5-1.5	
P 2072	■ ■ ■ ■ ■ ■ ■ ■	■ ■		100-130	0.5-1.5	
VPG 1781	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■		90-100	0.2-1.5	
VPN 963	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■		80-90	0.1-1.5	
GS 891	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■		95-101	1.5-2.0	
EP 3500	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■	●	150-170	0.2-1.0	
GE 2063	■ ■ ■ ■ ■ ■ ■ ■	■ ■		90-160	1.7-2.5	Lubricant with co-stabilizing effect
G 70 S	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■ ■ ■	●	55-58	0.2-0.8	High molecular weight polyester (metal release effect)
G 71 S	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■ ■ ■	●	< -20 *	0.2-1.0	
3376	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■ ■ ■	●	84-88	0.2-0.8	
G 72	■ ■ ■ ■ ■ ■ ■ ■	■ ■	●	43-47	0.3-1.0	
G 78	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■ ■ ■	●	105-115	0.3-1.2	
G 78 V	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■ ■ ■	●	100-110	0.3-1.2	
P 621	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■ ■ ■	●	82-85	0.2-0.8	
1732	■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■ ■ ■	●	100-115	0.3-1.2	

EDENOL® & LOXIOL®

LOXIOL® and EDENOL® are the plastics additives brand names of Emery Oleochemicals. Our products are based on natural resources for the processing of plastics materials. The main product groups and functions we offer are:

Lubricants – Optimise the processing characteristics of plastics materials. Our lubricants improve the rheology of the polymer melt by reducing friction and resistance to flow within the melt. >>> Positive influence on the mechanical properties, machinery output and surface finish of the final product.

Release Agents – Aid in the separation of a component from its mould. >>> Positive effect on cycle time and surface finish.

Special Plasticizers – Improve processability and performance of plastics and synthetic rubbers. >>> Positive influence on flexibility and durability of the final article.

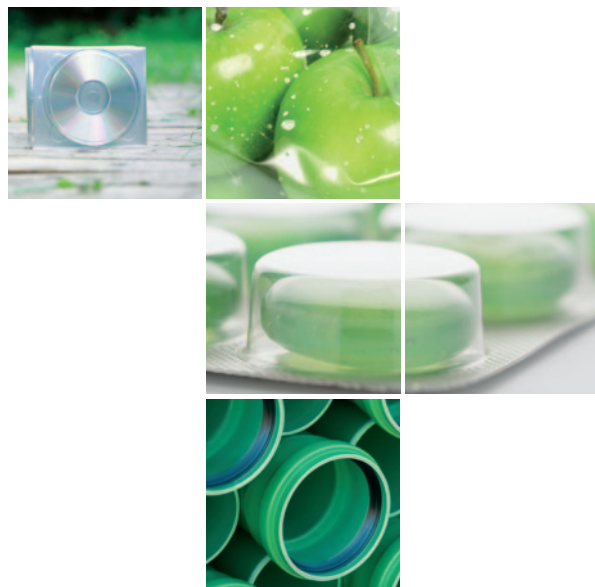


Viscosity Regulators – Improve the flow of PVC paste formulations. >>> Positive influence on processing temperature and processability.

Antistatic Agents – Eliminate the build-up of a static charge in the finished article. >>> Positive effects including avoidance of dust pick-up, handling problems as well as the risks associated with static discharges.

Antifogging Agents – Prevent the formation of water droplets on plastics film surfaces. >>> Positive effect on visibility, quality and attractiveness of packed products and avoidance of damage to plants in growing tunnels.

Antiblocking/Slip Agents – Reduce the friction between the polymer to polymer surface or processing equipment. >>> Positive effect on production handling by preventing adhesion.



CREATING VALUE FOR OUR CUSTOMERS, ANYWHERE IN THE WORLD.



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