

METALWORKING ADDITIVES

TECHNICAL DATA SHEET

Zschimmer & Schwarz offers a wide variety of additive technology used to formulate high-performance metal-forming and metal-removal fluids.

- ▶ Maximize heat transfer and coolant life
- ▶ Improve surface finish and corrosion protection
- ▶ Reduce friction and manufacturing costs

PRODUCT NAME	CHEMISTRY	COMPOSITION	PERFORMANCE	STATE @ ROOM TEMPERATURE	pH*	SPECIFIC GRAVITY @ 20 °C
PEG/PPG ESTERS/ ETHERS	CLASS	FATTY ACID	HLB #	PHYSICAL STATE	pH	S. G. @ 25 °C
MULSIFAN 200 DO	PEG ester	Di-oleate	5.3	Liquid	6	0.94
MULSIFAN 400 MO	PEG ester	Mono-oleate	11.8	Liquid	6	1.01
MULSIFAN 600 MO	PEG ester	Mono-oleate	13.6	Liquid	6	1.03
MULSIFAN 1000 MS	PEG ester	Mono-stearate	15.5	Solid	6	1.05
MULSIFAN SML-20	PEG ester	Sorbitan 20 monolaurate	16.7	Liquid	5.5	1.07
MULSIFAN L101 DS	EO/PO ester	Di-stearate	N/A	Liquid	6	1.00
MULSIFAN L61 DT	EO/PO ester	Di-tallate	N/A	Liquid	6	0.99
MULSIFAN RT 11	Polyglycol ether	Proprietary mix	15.8	Solid	6	1.01
MULSIFAN RT 133	Polyglycol ether	Proprietary mix	9.0	Liquid	6	0.97
MULSIFAN SCO	Sodium salt	Sulfated castor oil	N/A	Liquid	7.5	1.05
ACID PHOSPHATE ESTERS	CLASS	FATTY ALCOHOL	PHOSPHORUS [%]	PHYSICAL STATE	pH	S. G. @ 25 °C
PHOSPHETAL 2-EH	Acid	2-Ethylhexyl	11.6	Liquid	2	1.02
PHOSPHETAL 8147 K	K salt	POE(4) C8-C10	4.1	Liquid	7	1.11
PHOSPHETAL DA 6	Acid	POE(6) iC10	5.0	Liquid	2.5	1.04
PHOSPHETAL OAX	Acid	POE(4) C18:1	5.0	Liquid	2	1.03
PHOSPHETAL TDA	Acid	iC13	5.5	Liquid	2.5	1.06
PHOSPHETAL TEA 80	Acid	TEA-polyphosphate	18.0	Liquid	2	1.48
PHOSPHONATES	CLASS	COMPOSITION	PHOSPHORUS [%]	PHYSICAL STATE	pH	S. G. @ 25 °C
CUBLEN AP 5	Acid	ATMP	4.2	Liquid	2	1.30
CUBLEN DNC 450	Acid	DTPMPA	12.2	Liquid	< 2	1.49
CUBLEN K 60	Acid	HEDP	9.0	Liquid	2	1.45
CUBLEN P 50	Acid	PBTC	5.8	Liquid	2	1.29
CUBLEN R 60	Acid	HEMPA	14.9	Liquid	< 2	1.37
AMIDES	CLASS	COMPOSITION	COLOUR	PHYSICAL STATE	pH	S. G. @ 25 °C
PURTON 9481/2	DIPA amide	Di-isopropyl amine	Amber	Liquid	10	0.96
PURTON 9502	TOFA AMP	Tall oil fatty acid	Amber	Solid	10	0.92
PURTON 9509	Oleic MIPA	Mono-isopropyl amine	Amber	Liquid	10.5	0.93
SORBITAN ESTERS	CLASS	POUR PT. [°C]	FLASH PT. [°C]	KV 40 [cST]	VI	KV 100 [cST]
LUBRICIT SMO	Mono-oleate	0	270	424	75	25
LUBRICIT STO	Tri-oleate	-30	230	110	135	14
LUBRICIT SML	Monolaurate	5	215	1435	0	36

* pH measured as 5% product in distilled water

Please inquire about additional tailor-made products that can be made to fit your exact performance requirements.

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SYNTHETIC ESTERS FOR INDUSTRIAL APPLICATIONS

TECHNICAL DATA SHEET

A wide variety of synthetic esters are available to meet the demanding requirements of industrial, automotive, dielectric and marine applications. When operating environments call for a lubricant that is environmentally friendly, food-safe, fire-resistant or bio-derived, synthetic esters deliver lubricity and solvency over a broad temperature range, low volatility and deposit control, and a high viscosity index for natural energy efficiency.

SYNTHETIC ESTER	CHEMISTRY	VISCOSITY @ 40 °C [cST]	VISCOSITY @ 100 °C [cST]	VISCOSITY INDEX	FLASH PT. [°C]	POUR PT. [°C]
MONOESTERS						
LUBRICIT 2-EHL	Saturated	5.0	1.8	N/A	185	-25
LUBRICIT 2-EHO	Unsaturated	8.0	2.7	190	220	-40
LEXOLUBE HS-S*	Saturated	11	3.0	130	225	5
DIESTERS						
LUBRICIT DIOA	Diacid	9	2.7	150	215	-60
LUBRICIT DIDA	Diacid	14	3.6	145	230	-60
LUBRICIT DTDA/1	Diacid	27	5.4	135	250	-60
LUBRICIT 2-EHD	Dimer	83	13	150	315	-40
POLYOL ESTERS						
LUBRICIT TMP C9	TMP	21	4.6	140	275	-50
LEXOLUBE PQ-25*	PE	25	5.0	135	265	-55
LUBRICIT PE 4810*	PE	32	6.1	145	300	-5
LEXOLUBE POE-46	Polyol	46	7.4	135	270	-45
LUBRICIT TMP C18	TMP oleate	46	9.4	190	325	-40
LUBRICIT PE 418	PE oleate	66	12	185	330	-20
LEXOLUBE PQ-68*	PE	68	8.6	100	250	-30
LEXOLUBE POE-68HT*	DPE	68	10	130	300	-40
LEXOLUBE POE-100HT*	DPE	100	12	120	300	-35
LEXOLUBE POE-220HT*	DPE	220	19	100	300	-25
LUBRICIT DPE 61C9*	DPE	390	26	90	315	-20
AROMATIC ESTERS						
LUBRICIT 3010	TM	135	13	80	280	-40
LEXOLUBE 4PM-114*	PM	170	16	90	275	-30
LUBRICIT 3013/1	TM	320	20	70	290	-30
COMPLEX ESTERS						
LEXOLUBE CLG-460	Polyol	460	40	135	285	-20
LEXOLUBE CG-3000	Polyol	3000	290	235	310	-20
NATURAL ESTERS						
LEXOLUBE GT-855 IG	Glyceryl (S)	15	4	135	235	-15
LUBRICIT GMO	Glyceryl (U)	50	9	150	240	0
LUBRICIT SMO	Sorbitan (U)	424	25	75	270	0

* Certain methods and uses may be covered by one or more awarded or pending patents held by Zschimmer & Schwarz worldwide.

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