



Lubricants

Printing inks

Ceramic printing inks

Textile additives

Construction chemicals

Metalworking oils

Hydraulic fluids

Plastics



Berg+Schmidt
Functional Lipids

Esters for Technical Applications



Stern Technology Center in Ahrensburg, near Hamburg

Berg + Schmidt – experience and competence

For some 60 years we have been engaged in developing, producing and marketing oleochemical specialities. Through our early presence in the key markets of south-east Asia with affiliates of our own, for instance in India, Malaysia and Singapore, and the continuous expansion of our marketing, production and distribution networks in Asia, Europe and America we now have the necessary flexibility and efficiency to supply customers around the globe with tailor-made product solutions. You are welcome to contact us at any time so that we can help you choose a suitable product.

Our production of quality esters started with the MCT oil plant in Malaysia, which we operate together with our sister company Sternchemie. This is the centre of our oleochemical activities.

Applications consultancy and product development – two of our strengths

Berg + Schmidt is a member of the owner-managed, independent Stern-Wywiol Gruppe. The heart of the group of companies is the Stern Technology Center in Ahrensburg, near Hamburg. On an area of 3,000 m² we have concentrated the applications laboratories of our 11 specialist firms under one roof, thus permitting interdisciplinary cooperation and the efficient use of synergisms. Here, together with our customers, we are able to develop individual solutions and implement ideas that widen horizons.

Our product range includes:

- Fatty alcohols
- Fatty acids
- Fatty acid esters
- Glycerol
- Castor oil derivatives
- Oleochemical specialities



Esterification plant in Malaysia



Stainless steel tank farm in Ouderkerk, near Rotterdam

Ethylhexyl esters

B+S Trade Name	Chemical Name	Specification Values							Typical Applications
		Aspect	Acid Value mg KOH/g	Iodine Value g ₂ /100 g	Viscosity at 40 °C mm ² /s	Pour Point °C	Cloud Point °C	Flash Point °C	
BergaSolv EHL	Ethylhexyl laurate	Liquid	< 0.5	< 1	5	-30	< 10	> 150	Cutting + hydraulic fluids / ceramic inks
BergaSolv EHC	Ethylhexyl cocoate	Liquid	< 1	< 16	6	-24	< -10	170	Cutting + hydraulic fluids / ceramic inks
BergaCare EM-OP	Ethylhexyl palmitate	Liquid	< 0.2	< 1	9	< -3	< 2	210	Lubricants / spinning oils
BergaCare EM-OS	Ethylhexyl stearate	Liquid	< 0.5	< 1	9	< 3	< 10	215	Lubricants / metalworking fluids / spinning oils
BergaLub EHO	Ethylhexyl oleate	Liquid	< 1	58–100	8	< 0	< 0	210	Lubricants, solvents
BergaLub EHO-P	Ethylhexyl oleate	Liquid	< 1	58–72	8	< -20	< 0	210	Lubricants, solvents
BergaLub OT	Ethylhexyl tallowate	Liquid	< 1	32–42	10	-	< -8	> 200	Lubricants / sizing agents / metalworking fluids

Isopropyl esters

B+S Trade Name	Chemical Name	Specification Values							Typical Applications
		Aspect	Acid Value mg KOH/g	Iodine Value g ₂ /100 g	Viscosity at 40 °C mm ² /s	Pour Point °C	Cloud Point °C	Flash Point °C	
BergaSolv IPL	Isopropyl laurate	Liquid	< 1	< 1	4	< -10	< -8	120	Solvent for sheet-fed offset printing + ceramic inks, foundry chemicals
BergaCare EM-14	Isopropyl myristate	Liquid	< 0.2	< 1	5	< -3	< 4	> 150	Solvent for sheet-fed offset printing + ceramic inks, foundry chemicals
BergaCare EM-16	Isopropyl palmitate	Liquid	< 0.3	< 1	7	12	13	170	Solvent for sheet-fed offset printing
BergaSolv IPO	Isopropyl oleate	Liquid	< 0.5	65–80	6	< -15	< -8	175	Solvent for cleaners

Glycerol esters / glycol esters

B+S Trade Name	Chemical Name	Specification Values							Typical Applications
		Aspect	Acid Value mg KOH/g	Iodine Value g ₂ /100 g	Viscosity at 40 °C mm ² /s	Pour Point °C	Cloud Point °C	Flash Point °C	
BergaBest MCT Oil 60/40	Capryl / caprin triglyceride	Liquid	< 0.1	< 1	15	-	< -5	250	Food-grade inks and lubricants
BergaBest GS 40	Glyceryl stearate 40%	Flakes / beads	< 3	< 2	-	-	-	240	Emulsifier, plastics as master batches
BergaSurf GS 90	Glyceryl stearate 90%	Pastilles / beads	< 3	< 2	-	-	-	240	Anti-slip, antistatic and mould release agent
BergaBest GS SE	Glyceryl stearate S.E.	Flakes / beads	< 5	< 2	-	-	-	240	Emulsifier, plastics as master batches
BergaBest PGDE	Propylene glycol dicaprylate dicaprate	Liquid	< 0.1	< 1	7	-35	-30	185	Hydraulic fluids, defoamers, food grade lubricants
BergaLub PGDO	Propylene glycol dioleate	Liquid	< 3	78–90	22	< -10	< 0	> 230	Food-grade lubricants, leather

Neopentylglycol esters

B+S Trade Name	Chemical Name	Specification Values							Typical Applications
		Aspect	Acid Value mg KOH/g	Iodine Value g ₂ /100 g	Viscosity at 40 °C mm ² /s	Pour Point °C	Cloud Point °C	Flash Point °C	
BergaLub NPG2	NPG dioleate	Liquid	< 1.5	70–80	25	< -20	< -5	295	Lubricants, metalworking fluids, spinning oils

Methyl esters

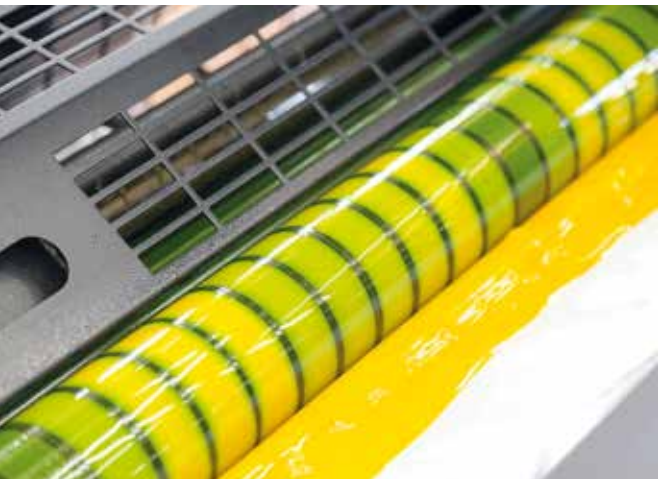
B+S Trade Name	Chemical Name	Specification Values							Typical Applications
		Aspect	Acid Value mg KOH/g	Iodine Value g ₂ /100 g	Viscosity at 40 °C mm ² /s	Pour Point °C	Cloud Point °C	Flash Point °C	
BergaSurf 1218 ME HSG	Coconut methyl ester, heat-stable grade	Liquid	< 1	9–13	4	-	-	125	Cutting fluids
BergaSurf ME-818	Coconut methyl ester, C8–C18	Liquid	< 1	7–12	3	-	-	125	Surfactants
BergaSurf 1298 ME	Methyl laurate	Liquid	< 1	< 1	3	5	-	125	Cutting fluids
BergaBest 1698 ME-H	Methyl palmitate	Paste	< 1.5	-	4	> 25	> 25	175	Metal-working fluids
BergaSurf 1870-H ME	Methyl stearate	Paste	< 1	< 2	5	-	-	170	Master batches, rolling oils
BergaSurf 18:1-90 ME	Methyl oleate	Liquid	< 0.5	80–95	5	< -6	< -3	165	Lubricants, concrete releasing agents
BergaSurf 18:1-98 ME	Methyl oleate	Liquid	< 0.5	90–105	5	< -6	< -3	165	Lubricants, sizing agents, concrete releasing agents, leather
BergaSurf RME	Rapeseed methyl ester	Liquid	< 0.5	< 120	4	< -12	< -3	120–180	Lubricants, sizing agents
BergaSurf SME	Soy methyl ester	Liquid	< 0.5	< 135	4	< -12	< -5	120–180	Lubricants, mould release agents

Trimethylolpropane esters / isotridecyl esters / pentaerythritol esters

B+S Trade Name	Chemical Name	Specification Values							Typical Applications
		Aspect	Acid Value mg KOH/g	Iodine Value g ₂ /100 g	Viscosity at 40 °C mm ² /s	Pour Point °C	Cloud Point °C	Flash Point °C	
BergaLub TMP 3	TMP trioleate	Liquid	< 1	70–90	47	-40	-20	320	Lubricants / hydraulic fluids / leather
BergaLub TMP3-T	TMP trioleate	Liquid	< 2	80–90	47	-40	< -0	320	Lubricants / hydraulic fluids / leather
BergaLub TMP3-HV	TMP trioleate	Liquid	< 2	80–95	64	< -33	< -10	300	Lubricants / hydraulic fluids / leather
BergaLub T-810	TMP tricaprilate/ tricaprate	Liquid	< 0.1	< 1	20	-40	-30	235	Lubricants
BergaLub T-900	TMP tripelargonate	Liquid	< 0.5	< 2	20	-45	-20	210	Lubricants
BergaLub ITS	Isotridecyl stearate	Liquid	< 0.5	< 2	16	-	< 9	200	Lubricants / metalworking fluids / cutting fluids
BergaLub PE4	Pentaerythritol tetraoleate	Liquid	< 0.7	70–80	68	< -20	< 7	300	Lubricant additives

Butyl esters

B+S Trade Name	Chemical Name	Specification Values							Typical Applications
		Aspect	Acid Value mg KOH/g	Iodine Value g ₂ /100 g	Viscosity at 40 °C mm ² /s	Pour Point °C	Cloud Point °C	Flash Point °C	
BergaLub NBS	N-butyl stearate	Liquid	< 0.5	< 1	6	20	24	200	Cutting fluids / leather
BergaLub NBO	N-butyl oleate	Liquid	< 1	69–78	6	< -15	< -5	175	Lubricants / leather
BergaLub IBL	Isobutyl laurate	Liquid	< 0.5	< 1	4	< -9	< 0	135	Foundry chemicals
BergaLub IBS	Isobutyl stearate	Liquid	< 0.5	< 1	7	18	21	180	Lubricants, solvent carriers
BergaLub IBO	Isobutyl oleate	Liquid	< 0.5	70–85	6	< -15	< -6	190	Lubricants, solvent carriers
BergaLub IBT	Isobutyl tallowate	Liquid	< 0.5	40–53	6	-	< -3	190	Lubricants, elastomers



Esters – natural helpers for modern product concepts

Fatty acid esters are modern, sustainable additives, most of which are produced on the basis of vegetable oils. With their multifunctional properties they offer numerous possibilities of optimizing technical products such as lubricants, printing inks and other auxiliary substances. Fatty-acid esters can easily be worked into mineral oil-based formulations and are readily biodegradable.

Through its long-standing relations with suppliers, and since Berg + Schmidt has production facilities of its own for esterification and transesterification in Asia, the company is able to offer a wide range of fatty acids and alcohols in different combinations. In

this way we can adjust quality and efficiency parameters such as fatty-acid composition, acid value etc. specifically to meet our customers' individual requirements.

Berg + Schmidt is certified according to ISO 9001 and ISO 22000 (HACCP). We naturally supply selected esters such as BergaBest MCT Oil with sustainability, kosher or halal certification if requested.

In bulk, in IBCs or in steel drums: from our modern logistics centres in Rotterdam and Singapore we can supply our products in practically any packaging unit.

Applications

- *Lubricants*
- *Printing inks*
- *Ceramic printing inks*
- *Textile additives*
- *Construction chemicals*
- *Metalworking oils*
- *Hydraulic fluids*
- *Plastics*
- *Etc.*

Esters for Technical Applications

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