



# WE CREATE

## NATURE BASED TECHNOLOGY



**OLEOCHEMICALS**  
TECHNICAL APPLICATIONS

IOI Oleo GmbH



**OLEOCHEMICALS**

## Contents

Foreword .....	3
Technical applications .....	5
SOFTENOL® additives for the EPS industry .....	6
Lubricants and other applications .....	8

## Foreword

IOI Oleo GmbH, a branch of the Malaysian IOI Group, has been providing natural based chemicals for technical applications for decades.

Our manufacturing sites located in Witten and Wittenberge (Germany) operate according to the highest quality standards, allowing us to successfully serve markets with advanced requirements worldwide.

In our R&D centres we develop innovative, customized products that add value to your business. Our service includes competent technical support by our Application Department before and after sales.

That is why our SOFTENOL® types are well-known throughout the world for their reliable performance.

Committed to the success of our customers, we live our core values EXCELLENCE IN EXECUTION, SPEED and INNOVATION.

You are cordially invited to experience sustainable business with IOI Oleo.

Date: July 2016



**OLEOCHEMICALS**

## Technical Applications

IOI Oleo GmbH offers a broad range of products for technical applications under the brand name SOFTENOL®.

The majority of these products are manufactured from natural-based raw materials, making them biodegradable, physiologically safe, and in many cases suitable for use in the food industry.

SOFTENOL® types perform in different application areas, e.g.-as

- Base oil for lubricants, suitable for the food industry,
- Anti condense agents for agricultural foils,
- Processing aids for the EPS industry,
- Anti-blooming agent for hot melts,
- Deep drawing oils for aluminium and tin plates

In this survey, only some fields of application can be mentioned as examples.

Special modifications or even tailor-made SOFTENOL® grades can be made available on request.

# 1

## SOFTENOL® additives for the EPS industry



Product name	Chemical description	Application/properties	Appearance
SOFTENOL® 3118	Triglyceride	Processing aid for EPS (expandable polystyrene)	solid
SOFTENOL® 3168	Triglyceride	Processing aid for EPS (expandable polystyrene)	solid
SOFTENOL® 3169	Triglyceride	Processing aid for EPS (expandable polystyrene)	solid
SOFTENOL® 3352	Citric acid ester	Processing aid for EPS (expandable polystyrene)	solid
SOFTENOL® 3600	Polyglycerol Polyricinoleate	Adhesive agent for EPS, used in dry coating process, applicable in the food industry	liquid
SOFTENOL® 3945	Mono-di-glyceride	Processing aid for EPS (expandable polystyrene)	solid
SOFTENOL® 3995	Monoglyceride	Processing aid for EPS (expandable polystyrene)	solid
WITAFROL® 7500	Mixture of hydrophilic fatty esters	Defoamer	liquid

Acid value mg KOH/g	Saponification value mg KOH/g	Iodine value g I <sub>2</sub> /100 g	Melting point °C	Hydroxyl value mg KOH/g	Viscosity 20 °C mPa·s	Density 20 °C	Monoglyceride content %	Glycerol content %	Colour APHA	Water %
max. 1	185–195	max. 2	≈ 72	max. 5	–	–	–	–	–	–
max. 5	190–205	max. 3	≈ 62	max. 10	–	–	–	–	–	–
max. 5	170–200	max. 2	≈ 71	max. 5	–	–	–	–	–	–
max. 5	145–155	–	≈ 68	max. 20	–	–	–	–	–	–
max. 6	175–190	75–95	–	80–100	200–500 (60 °C)	–	–	–	–	–
max. 3	158–175	max. 3	≈ 60	–	–	–	≈ 45	max. 2	–	–
max. 3	155–170	max. 2	≈ 70	–	–	–	min. 90	max. 2	–	–
max. 3	120–145	–	–	–	–	–	–	–	–	–

# 2

## Lubricants and other applications



Product name	Chemical description	Application/properties	Appearance
DYNACERIN® 786	Fatty acid ester	Anti blooming additive for hot melts	solid
SOFTENOL® 3108	Glycerol-Tricaprylate-Caprata	Multipurpose base oil, sliding and anti-blocking agent, lubricant for feeding cables, also applicable in the food industry; NSF H1 lubricant	liquid
SOFTENOL® 3190	Blend of fatty acid esters	Anti condense (anti fogging) agent for agriculture films	solid
SOFTENOL® 3191	Blend of fatty acid esters	Anti condense (anti fogging) agent for agriculture films	solid
SOFTENOL® 3192	Blend of fatty acid esters	Anti condense (anti fogging) agent for agriculture films	solid
SOFTENOL® 3408	1,2-Propanediol Dicaprylate/caprata	Lubricant, release agent for the food industry	liquid
SOFTENOL® 3600	Polyglycerol Polyricinoleate	Used as adhesive agent during dry coating, applicable in the food industry	liquid
SOFTENOL® 3660	Oleyl Erucate	Additive for cutting and lubricating oils	liquid
SOFTENOL® 3765	Aqueous preparation based on oxethylation product of medium Chain partial glycerides	Release agent for gluethreads for the bonding of veneers	liquid
SOFTENOL® 3767	Oxethylation product of medium chain partial glycerides	Antistatic agent	liquid
SOFTENOL® 3803	Ester of saturated fractionated plant fatty acids	Deep drawing oil for forming of aluminium foils and tin plates; NSF 3H lubricant	liquid
SOFTENOL® 3829	Ester of saturated fractionated plant fatty acids	Deep drawing oil for the forming of aluminium foils and tin plates; NSF 3H lubricant	liquid
SOFTENOL® 3948	Mono-di-glyceride of fatty acids	Additive for plastics	liquid
SOFTENOL® 3991	Monoglyceride	Internal antistatic agent for polyolefins	solid

Acid value mg KOH/g	Saponification value mg KOH/g	Iodine value g I <sub>2</sub> /100 g	Melting point °C	Hydroxyl value mg KOH/g	Viscosity 20 °C mPas	Density 20 °C	Monoglyceride content %	Glycerol content %	Colour APHA	Water %
max. 15	115–135	–	59–65	–	–	–	–	–	–	–
max. 0.2	310–360	max. 0.5	–	–	24–36	0.92–0.96	–	–	max. 100	–
max. 2	–	max. 20	≈ 54	140–160	–	–	–	–	–	–
max. 2	–	max. 25	≈ 51	150–170	–	–	–	–	–	–
max. 2	–	max. 25	≈ 52	150–170	–	–	–	–	–	–
max. 1	300–340	max. 1	–	–	≈ 11	≈ 0.92	–	–	–	–
max. 6	175–190	75–95	–	80–100	200–500 (60 °C)	–	–	–	–	–
max. 1	95–110	85–95	–	max. 10	25–35	0.86–0.87	–	–	–	–
–	≈ 50	–	–	–	–	–	–	–	–	–
max. 1	90–110	max. 1	–	–	–	≈ 1.08	–	–	max. 300	max. 0.5
max. 2	310–360	–	–	–	24–36	–	–	–	–	max. 150
max. 2	400–450	max. 2	–	–	230–260	1.00–1.02	–	–	–	–
max. 6	150–170	65–95	–	–	–	–	32–52	max. 6	–	–
max. 3	155–170	max. 2	≈ 70	–	–	–	min. 90	max. 2	–	–

All registered trademarks displayed in this brochure are the property of the IOI Oleochemicals Group. Users of this brochure are not permitted to use these trademarks without the prior written consent of their proprietor. All rights are reserved. All rights not expressly granted are reserved.

We reserve the right to make any changes as a result of technological progress or developments. No guarantee or warranty is implied or intended as to any particular properties of our products. The customer is not exempted from the obligation to conduct careful inspection and testing of incoming goods. Reference to trademarks used by other companies is neither a recommendation, nor should it give the impression that products of other companies cannot be used. All IOI Oleochemicals business transactions are exclusively governed by our General Business Terms and Conditions – please see [www.ioioleo.de](http://www.ioioleo.de) (Terms and Conditions)

# Contact

**IOI Oleo GmbH**

Witten, Germany | +49 2302 925 100 | [tech@ioioleo.de](mailto:tech@ioioleo.de) | [www.ioioleo.de](http://www.ioioleo.de)



**OLEOCHEMICALS**