

## Monoesters Technical Data Sheet

Monoesters are manufactured from naturally occurring long chain fatty acids, primarily derived from renewable fats and seed oils. These simple ester molecules have a polar ester group that is attracted to metal surfaces while the hydrocarbon tail provides a lubricious layer that reduces friction and provides boundary lubrication. Monoesters have a low viscosity, high viscosity index (VI), good thermal stability and excellent biodegradability. These esters have an outstanding health and safety profile and some are popular ingredients for personal care products and cosmetics.

Isopropyl and other branched esters (covered under US pat. 7,008,909) give outstanding hydrolytic stability and are preferred for water-based metalworking and textile applications. Monoesters are also used as lubricity additives in mineral oil and synthetic hydrocarbon lubricants to improve EHL and boundary lubrication.

The low viscosity and high polarity of monoesters facilitate the removal of residual lubricant by washing after processing, important for metalworking and textile applications where surfaces must be free of residue that would impact plating, painting or dyeing.

Synthetic Ester	Chemistry	Viscosity @ 40°C (cSt)	Viscosity @ 100°C (cSt)	Viscosity Index	Flash Pt. (°C)	Pour Pt. (°C)
LUBRICIT 2-EH iC9	Saturated	3.5	1.4	n/a	150	-75
LUBRICIT iC9-9	Saturated	4.5	1.7	n/a	145	-75
LUBRICIT 2-EHL	Saturated	5.0	1.8	n/a	185	-25
LEXOLUBE IPP	Saturated	5.0	2.0	275	170	10
LEXOLUBE IPO	Unsaturated	5.5	2.0	215	175	-25
LUBRICIT 2-EHC	Saturated	6.0	2.0	165	180	-25
LEXOLUBE NBS	Saturated	6.5	2.2	195	195	20
LUBRICIT 10L	Saturated	7.0	2.3	170	195	20
LUBRICIT 2-EHO	Unsaturated	8.0	2.7	190	220	-40
LUBRICIT 2-EHC16	Saturated	8.5	2.6	165	210	0
LUBRICIT 2-EHS	Saturated	10	2.9	170	220	5
LEXOLUBE HS-S*	Saturated	11	3.0	130	225	5
LUBRICIT TDS	Saturated	16	4.2	170	240	0

### Features

- Lubricity/boundary lubrication
- Low viscosity
- Low smoke
- Thermal stability
- Renewable/biodegradable
- Worker friendly

### Applications

- Metalworking
- Textile
- Oilfield
- Grease
- Bio-based lubricants
- Environmentally friendly lubricants

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

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

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