

# SEQENS

OUR SCIENCE FOR YOUR FUTURE

## SULFAD

### EXTREME PRESSURE ADDITIVES

SEQENS extreme pressure additives are sulfurized molecules that provides resistance to high loads and at times combined good anti-wear performances for metalworking applications and greases additivation.

Our **SULFAD** range provides light color and low odor solutions from 10 to 17% of sulfur, active or inactive, with good solubility in Group I, II, III and naphtenic base stocks.

**SULFAD** range fulfills the various market's needs of metal compatibility, additive synergies, base stock solubility, eco-friendly lubricants and high performance applications.



Our **SULFAD** additives are manufactured in France in an **Ecovadis Platinum Certified** production site.

With innovation as DNA, SEQENS is constantly looking to answer the challenges its customers are facing such as EHS requirements, supply chain reliability, performances and also reducing their impact on the environment. In this context, Environmentally Acceptable Lubricants (EAL), which are bio lubricants that are “biodegradable”, “minimally toxic” and are “not bioaccumulative”, is a strong focus for SEQENS teams.

SEQENS extends the **LuSC** list with 3 Extreme Pressure additives: **SULFAD® 1710E**, **SULFAD® 1711E** and **SULFAD® 1523E**.

Our three extreme pressure additives, **SULFAD® 1710E**, **SULFAD® 1711E** and **SULFAD® 1523E** comply with the criteria according to EU Commission decision 2018/1702 and have been added to the Lubricant Substance Classification list (in short: LuSC list).

The **LuSC** list is a list of substances that have been assessed on their biodegradation, aquatic toxicity, renewability and from an exclusion list of substances. This is a white list of components and packages approved for use in lubricating formulations intended to be submitted to **European Ecolabel certification**.

Therefore, **SULFAD® 1710E**, **SULFAD® 1711E** and **SULFAD® 1523E** are the best candidates for use in lubricant formulations complying with the European Ecolabel.

# The full SULFAD range

Products	Chemical basis	Total sulfur	Active sulfur	Viscosity at 40°C	Color	Copper corrosion	Welding Load		Antiwear performances (5% in SN 100)
		%	%	mm <sup>2</sup> /s		3H at 100°C (10% in SN 100)	5% in SN 100 (kg)	10% in SN 100 (kg)	1h/40 kg (mm)
			ASTM D 1662	ASTM D 445	ASTM D 1500	ASTM D 130	ASTM D 2783		ASTM D 2783
<b>SULFAD 1010 E</b>	Fatty Acid Esters	10	<1	35	2	1b	400	400	0,54
<b>SULFAD 1522 E</b>	Fatty Acid Esters & Triglycerides	15	4	275	5	4c	500	500	0,76
<b>LuSC SULFAD 1523 E</b>	Fatty Acid Esters & Triglycerides	15	4	275	5	1b	500	500	0,95
<b>LuSC SULFAD 1710 E</b>	Fatty Acid Esters	17	7	45	6	4c	315	400	0,66
<b>LuSC SULFAD 1711 E</b>	Fatty Acid Esters	17	7	45	6	1b	315	400	0,77
<b>SULFAD 1716 E**</b>	Fatty Acid Esters	17	7	45	6	3b	315	400	0,70
<b>SULFAD 1717 E*</b>	Fatty Acid Esters	17	7	45	6	1b	315	400	0,77

\* Most suitable for ester based formulations \*\*Compatible with Zn-based antiwear additives



## WHO ARE WE ?

Seqens Advanced Specialties has more than 50 years of experience in up-scaling and custom manufacturing of small molecules and polymers for the most demanding industries. We operate on 2 plants in France, both ISO 9001 certified. SEQENS Advanced Specialties can offer you continuum of expertise from the laboratory to industrial scale.

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