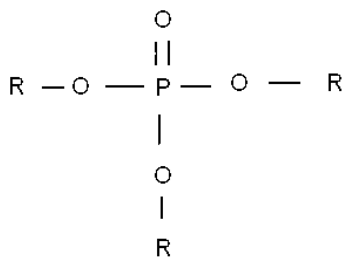
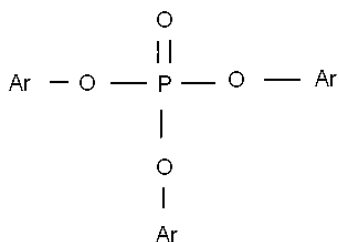


Syn-O-Ad® Phosphate Esters



Syn-O-Ad® Product Selector

Butylated Phenyl Phosphate

- Syn-O-Ad® 8485
- Syn-O-Ad® 8478
- Syn-O-Ad® 8477

Propylated Phenyl Phosphate

Syn-O-Ad® 9578

Tricresyl Phosphate

Syn-O-Ad® 8484

Trixylenyl Phosphate

Syn-O-Ad® 8475

Tributyl Phosphate

Syn-O-Ad® 8412

Overview

Syn-O-Ad® lubricant additives and base stocks are triaryl or trialkyl phosphates, which provide:

- Ashless anti-wear/EP film formation;
- Superior oxidation and thermal stability; and
- Biodegradable fluids.

Organic phosphate esters are important functional additives employed in lubricants and metalworking fluids. Syn-O-Ad® lubricant additives are free of metallic, sulfur, and chlorine compounds.

Syn-O-Ad® phosphate ester products exhibit superior oxidative stability. Lubrication is enhanced based on the decomposition of the additive at the contacting metal surfaces. Additive level in formulations ranges between 1-3 wt %. Improved seal swell level is at 1-2 wt%.

Safety & Handling

Consult the Material Safety Data Sheet for this product.

Shipping Information

Syn-O-Ad® 8412 is available in bulk tank trucks, isocontainers, and 455 lb drums.

Syn-O-Ad® 8477 is available in bulk tank trucks, isocontainers, and 525 lb drums.

Syn-O-Ad® 8478 is available in bulk tank trucks, isocontainers, and 533 lb drums.

Syn-O-Ad® 8485 is available in bulk tank trucks, isocontainers, and 533 lb drums.

Typical Properties

Product	8485	8478	8477	9578	8484	8475	8412
Specific gravity, 20°C/20°C	1.181	1.165	1.155	1.161	1.172	1.142	0.978
Viscosity, cst @ 40°C	22	32	46	32	32	46	2.4
Pour point, °C	-26	-23	-18	-24	-30	-29	-80
Flash point, °C	241	257	260	255	241	235	166
Acidity, mgKOH/g (max)	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Moisture, weight %	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Phosphorus, weight %	8.5	8.0	7.7	8.0	8.4	7.7	11.7

Key Applications

Product	8485	8478	8477	9578	8484	8475	8412
ATF Fluid	X	X	X	X			
Aviation hydraulic fluid							X
Drilling mud additive							X
Engine oil	X	X	X	X	X		
Fire resistant hydraulic fluids	X	X	X			X	
Grease	X	X	X	X			
Metalworking fluids	X	X	X	X	X		X
Refrigerant lubricant additive	X	X	X	X	X	X	
Seal swell agent	X	X	X	X	X	X	
Vegetable hydraulic fluid	X	X	X	X	X		

Antiwear Performance

Four Ball Wear Test, ASTM D-4172

Mm wear scar

1200 RPM, 40 kg, 60 min, 75°C

Product	Reference Oil	8485	8478	8477	9578	8484	8475
2% wt in mineral oil (ISO 22)	0.95	0.46	0.48	0.49	0.46	0.43	0.44
2% wt in PAO (ISO 32)	0.86	0.48	0.49	0.51	0.48	0.45	0.46
2% wt in polyol ester (ISO 22)	0.75	0.50	0.51	0.51	0.54	0.49	0.51

For more information about our products and to place an order, please contact one of Supresta's regional sales offices.

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fax 914.674.9735

ASIA PACIFIC REGIONAL SALES OFFICE
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Shanghai 200030 China
86 21 5298 9058
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EUROPEAN REGIONAL SALES OFFICE
Hoefseweg 1, PO Box 2501
3800 GB Amersfoort, The Netherlands
31 33 4534 575
fax 31 33 4534578

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