

EPSAIL®8088 is a biodegradable extreme pressure anti-wear additive containing sulfur and phosphorus. Mainly used as an extreme pressure anti-wear agent for greases, especially suitable for mining, construction, heavy machinery and other industries with high load performance requirements. Its performance is better than most traditional sulfur and phosphorus systems. It has a good synergistic effect with other extreme pressure and anti-wear additives, especially with MoS₂. With MoS₂, they can reach a PD value of 800kg and a Timken OK value of 65 pounds which is currently the most synergistic additive with extreme pressure performance. It can also be used as a water-based metal working fluid to replace chlorinated paraffin, and is widely used in extreme pressure ester, hot forging, deep drawing and other metal working applications.

CHEMICAL COMPOSITION

Inorganic extreme pressure agent

TYPICAL PROPERTIES

Test Item	Typical Data	Method
Appearance	White powder	Visual inspection
Sulfur content, %	19.7	SH/T 0303
Phosphorus content, %	12.0	SH/T 0296
Melting point, °C	≥200.0	GB/T 617
Finess (through 100 mesh), %	99.9	DB13/T 1234

Note: The above analytical data are not specifications.

PERFORMANCE CHARACTERISTICS

- Colorless, odorless, environmentally friendly, non-toxic, with good biodegradability
- Excellent additive and synergistic properties (MoS₂).
- Excellent extreme pressure performance
- No corrosion

APPLICATION

- Lubricating grease
- Metalworking fluids

USAGE METHOD

- Added to the grease formulation directly
- Recommended treat level: 1.0-5.0%

APPLICATION TEST DATA

- Test method (ASTM)
- D2596 EP Properties of Lubricating Grease (Four-Ball Method, 1800rpm, 27°C, 10s)
- D2266 Wear Preventive Characteristics of Lubricating Grease (Four-Ball Method, 1200rpm, 40kg(392N), 75°C, 1h)

Sample	PD value (kg)	Load wear index (kg)
Lithium grease	126	18
Lithium grease+3% EPSAIL® 8088	400	44
Lithium grease+5% EPSAIL® 8088	500	67
Lithium grease+3% MoS ₂	250	31
Composite lithium grease	160	22
Composite lithium grease+3% EPSAIL® 8088	500	55
Composite lithium grease+5% EPSAIL® 8088	620	75
Composite lithium grease+3% MoS ₂	315	33
Complex aluminium grease	126	21
Complex aluminium grease+3% EPSAIL® 8088	400	45
Complex aluminium grease+5% EPSAIL® 8088	620	76
Complex aluminium grease+3% MoS ₂	200	36
Polyurea-Base Grease	100	23
Polyurea-Base Grease +3% EPSAIL® 8088	620	--
Polyurea-Base Grease +5% EPSAIL® 8088	800	--
Polyurea-Base Grease +3% MoS ₂	250	48

PACKAGING AND STORAGE

Packaging	50kg/drum (Net weight)
Storage conditions	Store in a dry warehouse at -30-60℃ away from optical storage and transport the same as general chemicals in accordance with SH0164-1995

HANDLING INFORMATION

Avoid contact with skin, eyes and clothing. Operate in accordance with good industrial health and safety practices. Please refer to material safety data sheet (MSDS) for additional handling information on **EPSAIL®8088**.

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