

PSAIL® T304 is an environmentally friendly, phenol-free high-performance phosphorus-based extreme pressure and anti-wear additive. It is insoluble in water but readily soluble in organic solvents such as esters, alcohols, and ethers. With a high extreme pressure and anti-wear index, T304 exhibits excellent compatibility and is typically used in combination with organic sulfur additives to enhance the strength and toughness of protective films. It is widely applied in industrial/vehicle gear oils, metalworking fluids (e.g., cutting oils, rolling fluids), and lubricating greases. This additive also offers flame-retardant and antioxidant properties, making it suitable for use as an organic synthesis intermediate, gasoline additive, and flame retardant.

CHEMICAL COMPOSITION

Dibutyl phosphite (T304) CAS No.: 1809-19-4

TYPICAL PROPERTIES

Test Item	Typical Data	Method
Appearance	Colorless or light-yellow transparent liquid	Visual inspection
Density at 20°C, g/cm ³	0.986	GB/T 1884-2000
Viscosity at 40°C, mm ² /s	1.78	GB/T 265-1988
Flash point open cup, °C	≥100	GB/T 3536-2008
Acid number, mgKOH/g	7.46	GB/T 264-1983
Phosphorus content, %	14.5-16.0	SH/T 0296-1992
Copper corrosion at 100°C, 3h	≤1b	GB/T 5096-2017

Note: The above analytical data are not specifications.

PERFORMANCE CHARACTERISTICS

- Eco-friendly & phenol-free, colorless transparent liquid
- Highly soluble in organic solvents, low volatility
- Excellent extreme pressure & anti-wear performance, with additional flame-retardant and antioxidant properties; can be used as an organic synthesis intermediate
- Superior compatibility, blends well with various lubricant additives

APPLICATION

- Industrial & automotive gear oils
- Metalworking fluids & lubricating greases
- Flame-retardant materials, organic synthesis intermediates, etc.

USAGE METHOD

- Added to the formulation directly and compatibility needs to be tested before adding
- Recommended treat level: 0.3 ~1.0%

PACKAGING AND STORAGE

Packaging	50kg plastic drum or 200kg steel drum (Net weight)
Storage conditions	Store in a cool, dry, well-ventilated warehouse

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 **PSAIL® T304**.

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