

Specialty & Advanced Lubricants Range

1. PRODUCT DESCRIPTION

AISO Specialty and Advanced Lubricants address applications where standard mineral-oil products are insufficient. This range encompasses fully synthetic PAO and ester-based lubricants, biodegradable lubricants, food-grade products, metalworking fluids, heat transfer oils, and extended-drain longlife lubricants -- each designed for extreme conditions, environmental sensitivity, or regulatory compliance requirements.

2. KEY FEATURES

- PAO (Polyalphaolefin) base oils -- ultra-wide operating temperature range: -54 degC to +200 degC
- Polyol Ester (POE) and Diester oils -- high film strength and natural biodegradability
- PAG (Polyalkylene Glycol) -- excellent for worm gear and compressor applications
- Biodegradable formulations -- OECD 301B, OECD 302B compliant
- Metalworking fluids: neat cutting oils, water-miscible coolants, and forming fluids
- NSF H1 / H2 / 3H food-grade registered products
- Heat transfer fluids -- synthetic and mineral grades up to 400 degC
- Factory-fill and lifetime-fill lubricants (gear oils, ATFs)

3. APPLICATIONS

- Extreme low/high temperature environments (cold stores, furnace areas)
- Worm gear drives requiring high lubricity (PAG grades)
- Refrigeration compressors compatible with HFC, HFO, and CO2 refrigerants
- Environmentally sensitive areas requiring biodegradable fluids
- Food, beverage, and pharmaceutical manufacturing machinery
- High-speed precision machine tool spindles
- Closed-loop thermal systems and heat exchangers
- Metalworking: machining, grinding, stamping, and deep drawing

4. TYPICAL PROPERTIES (REPRESENTATIVE: PAO-BASED SYNTHETIC 5W-40)

Property	Typical Value
Kinematic Viscosity @ 40 degC (mm2/s)	~72
Kinematic Viscosity @ 100 degC (mm2/s)	~12.5
Viscosity Index	>= 185
Pour Point (degC)	<= -54
Flash Point (COC, degC)	>= 240
Evaporation Loss (Noack, 1h 250 degC, %)	< 6
Biodegradability (OECD 301B, %)	>40 (base oil grade dependent)
Oxidation Stability (RPVOT, min)	>= 2000
Density @ 15 degC (kg/L)	~0.855

5. PACKAGING

- 1L / 4L / 5L bottles and cans
- 20L jerry cans
- 200L drums
- 1000L IBC
- Custom packaging available for OEM supply agreements

6. STORAGE & HANDLING

Store in a clean, dry, temperature-controlled environment (5 degC to 40 degC). Keep containers sealed and labelled. Avoid mixing with mineral oils unless compatibility is confirmed. Follow SDS guidelines for handling. Shelf life: 5 years in original sealed containers.

DISCLAIMER

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