

## ZF-I Hydraulic Fluids

### Zinc-Free, Inherently Biodegradable Hydraulic Fluids

#### Description

Sustain ZF-I hydraulic fluids are high performance lubricants that utilise exclusive non-toxic, zinc-free technology to provide outstanding protection and performance in most manufacturing and mobile equipment operations. These fluids are particularly desirable for hydraulic applications in environmentally sensitive locations.

#### Application

Sustain ZF-I hydraulic fluids have been formulated for use within environmentally sensitive areas as well as for use in industrial manufacturing plants. They are particularly suited for use in hydraulic pumps with silver bearings, because the zinc-free formulation will not displace the silver in these bearings. The superior thermal and oxidative stability as well as excellent wear protection makes these fluids well suited for use in severe applications such as injection moulding machines or remote locations.

#### Typical Data

CHARACTERISTIC	UNIT		
ISO VG		32	46
Specific gravity @ 15.6 °C:	g/ml	0.855	0.865
Kinematic viscosity@ 40 °C:	mm <sup>2</sup> /s	31.7	45.4
Kinematic viscosity@ 100 °C:	mm <sup>2</sup> /s	5.5	6.8
Viscosity index:		110	104
Flash point (COC)	°C	216	233
Pour point :	°C	-42	-33

#### Advantages / Benefits

- Inherently biodegradable
- Zinc-free formulation
- Non-toxic and has a very low odour
- Excellent anti-wear characteristics
- Rust and corrosion protection
- High oxidative and thermal stability
- Long oil life
- Helps to reduce sludge and varnish deposits
- Superior resistance to foaming
- Excellent air release performance
- Excellent water separation and hydrolytic stability
- Miscible with both solvent refined mineral products and polyalphaolefin (PAO) based formulations.

#### Performance Levels

DIN 51524 Part 2 HLP

ISO 6743/4 Type HM (ISO 11158)

Denison HF-0

Eaton Brochure 03-401-2010

WGK 1

OECD 301B >30% biodegradability (28 days)

FZG Failure Load Stage >12