ExxonMobil
Aviation Lubricants

Exxon HyJet IV-A^{plus}

Fire-Resistant Phosphate Ester Hydraulic Fluid

Exxon HyJet IV-A^{plus} is a fire-resistant phosphate ester hydraulic fluid designed for use in commercial aircraft. It is the best-performing Type IV fluid and offers to a great extent many of the advantages of Type V fluids, including high temperature stability, low density, and rust protection. It is superior to all other commercial Type IV fluids in all these respects. Better stability means the fluid will not require changing due to degradation and results in reduced hydraulic system maintenance costs. Reduced density means less weight is carried by the aircraft, and thus lower fuel burn and operating costs. Rust protection results in reduced risk of equipment damage in the event of major contamination with water.

HyJet IV-A^{plus} also provides excellent low temperature flow properties that are becoming increasingly important for extended range polar flights, deposit free operation for long equipment life, and excellent protection against electrochemical corrosion (erosion) which may cause servo-valve and pump damage.

HyJet IV-A^{plus} meets the specifications of all major aircraft manufacturers, and SAE AS1241. It is included in the Qualified Product Lists of:

- Airbus
- ATR
- Boeing (heritage)
- Boeing (Douglas Division in Long Beach CA)
- Bombardier/Canadair
- Bombardier/DeHavilland
- British Aerospace (Avro International)
- Cessna
- Embraer
- Fairchild Dornier
- Fokker
- Gulfstream Aerospace
- Lockheed

HyJet IV-A^{plus} is compatible in all proportions with all approved phosphate ester aviation hydraulic fluids.

Typical Characteristics*

Viscosity, ASTM D 445, cSt	
at -53.9˚C (-65˚F)	1350
at 37.8˚C (100˚F)	10.6
at 98.9˚C (210˚F)	3.6
Pour point, ASTM D 97, ˚C (˚F)	Below -62 (-80)
Specific gravity, ASTM D 4052	
at 25˚C/25˚C (77˚F/77˚F)	0.996
Density at 15.6˚C(60˚F), kg/l (lb/gal)	1.001 (8.34)
Total acid number, ASTM D 974, mg KOH/g	0.05
Water, Karl Fischer, mass %	0.1
Flammability	
Flash point, ASTM D 92, ˚C (˚F)	174 (345)
Fire point, ASTM D 92, ˚C (˚F)	185 (365)
Autoignition point, ASTM D 2155, ˚C (˚F)	427 (800)
Shear stability, ASTM D 5621	
Viscosity Drop at 40˚C, %	22
Foaming tendency/stability, ASTM D 892	
Sequence I, Foam volume, ml/Time to collapse, sec.	10/10
Sequence II, Foam volume, ml/Time to collapse, sec.	15/5
Sequence III, Foam volume, ml/Time to collapse, sec.	10/8
Electrical conductivity at 20˚C, micro Siemens/cm	1.0
Bulk Modulus, Isothermal secant	
at 100˚F, 3000psi, psi	210,000
Thermal Conductivity at 40˚C	
Cal/sec/cm^2/˚C (Btu/hr/ft/˚F)	33x10^{-5} (0.0799)
Coefficient of thermal expansion, per ˚F (per ˚C)	0.00048 (0.00086)
Specific heat capacity, cal/g/˚C (same as Btu/lb/˚F)	0.41
Chemical Elements, ppm	
Calcium	110
Potassium	38
Chlorine	8
Sodium	5
Sulfur	220
Particle count, NAS 1683 Class	5

* Physical properties are listed in the table. Values not identified as maximum or minimum are typical and may vary within modest ranges.

Advantages

- Highest stability Type IV fluid
- Lowest density Type IV fluid
- Superior rust protection
- Deposit-free operation
- Excellent erosion control
- Approved by all aircraft OEMs
- Fully compatible with all approved phosphate ester aviation hydraulic fluids

Health and Safety

Based on available toxicological information, it has been determined that this product poses no significant health risk when used and handled properly. Information on use and handling, as well as health and safety information, can be found in the Material Safety Data Sheet which can be obtained from your local distributor; via the Internet on http://www.exxonmobil.com; or by calling 1-800-662-4525 and selecting prompt 2.

For additional technical information or to identify the nearest U.S. ExxonMobil supply source, call 1-800-662-4525

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