ExxonMobil

HyJet™ IV-A Plus

ExxonMobil Aviation , Malawi

Fire-Resistant Phosphate Ester Aviation Hydraulic Fluid

Product Description

Mobil HyJet IV-Aplus is a fire-resistant phosphate ester hydraulic fluid designed for use in commercial aircraft. It is the best-performing Type IV fluid and approaches to a great extent many of the performance capabilities of Type V fluids, including high temperature stability, long fluid life, density, and rust protection. It is superior to all other Type IV fluids in these respects. Mobil HyJet IV-A plus meets the specifications of all major aircraft manufacturers and SAE AS1241.

Features and Benefits

Mobil HyJet IV-A plus offers the following key features and benefits:

Features	Advantages and Potential Benefits
Best in high temperature stability among Type IV fluids	Longer fluid life. Lesser need to replace fluid due to degradation. Reduced hydraulic system maintenance costs
Lowest density Type IV fluid	Reduced weight of the hydraulic fluid carried by aircraft. Reduced aircraft fuel consumption, lower operating costs
Effective rust protection	Reduced the risk of equipment damage in the event of major water contamination
Excellent low temperature flow (viscosity) properties	Precise hydraulic system control and response even during extended range/polar flights. Longer equipment life
Excellent deposit control	Longer equipment life. Reduced maintenance costs
Excellent protection against electro-chemical corrosion (erosion)	Protection against servo valve and pump damage
Approved by all major aircraft manufacturers	Use as fleet lubricant by airline operators
Fully compatible with all approved phosphate ester hydraulic fluids	Flexibility in use by airline operators

Applications

Mobil HyJet IV-A plus fire-resistant aviation hydraulic fluid is used in commercial aircraft hydraulic systems where phosphate hydraulic fluids are recommended. It is compatible in all proportions with commercial Type IV and Type V phosphate ester aviation hydraulic fluids.

Mobil HyJet IV-A plus meets or exceeds the following industry and aircraft builder specifications. It is approved against all commercial aircraft manufacturer requirements and is included in their Qualified Products Lists.

Specifications and Approvals

This product has the following approvals:
AIRBUS NSA 307110N - Type IV, Low Density
Airbus Canada A2MS 564-003 Type IV, Class I, Grade A
CESSNA, Type IV
EMBRAER Type IV, Low Density
FOKKER Type IV, Low Density
GULFSTREAM 1159SCH302J - Type IV, Low Density
LOCKHEED C-34-1224C - Type IV, Low Density
ATR Type IV, Low Density
BOEING BMS 3-11P - Type V, Grade B and Grade C
BOEING BMS 3-11P - Type IV, Low Density
Boeing-Long Beach DMS2014H - Type 4
BAE/AVROBAC.M.333C - Type IV, Low Density

This product meets or exceeds the requirements of:
SAE AS1241D, Type IV, Class 1 (low density)

Properties and Specifications

Property	
Acid Number, mgKOH/g, ASTM D974	0.04
Autoignition Temperature, F, ASTM D2155	800
Bulk Modulus, Isothermal secant at 100 F/3000 psi, psi, ASTM D6793	210000
Calcium, ppm, ICPES	103
Chlorine, ppm, XRF	10
Coefficient of Thermal Expansion, 25 to 100 C, per degree C, API MPMS 11.1	0.00086
Conductivity @ 20 C, MicS/cm, ASTM D2624	1.4
Density @ 60 F, lb/USg, ASTM D4052	8.35
Fire Point, Cleveland Open Cup, °F, ASTM D92	370
Flash Point, Cleveland Open Cup, °F, ASTM D92	349
Foam, Sequence I, Collapse Time, s, ASTM D892	15

Property	
Foam, Sequence II, Collapse Time, s, ASTM D892	13
Foam, Sequence III, Collapse Time, s, ASTM D892	16
Four-Ball Wear Test, Scar Diameter, 10 kg, 600 rpm, 1 h, 75 C, mm, ASTM D4172 (mod)	0.33
Four-Ball Wear Test, Scar Diameter, 4 kg, 600 rpm, 1 h, 75 C, mm, ASTM D4172 (mod)	0.22
Four-Ball Wear Test, Scar Diameter, 40 kg, 600 rpm, 1 h, 75 C, mm, ASTM D4172 (mod)	0.73
Kinematic Viscosity @ 100 F, mm2/s, ASTM D445	10.6
Kinematic Viscosity @ 127.6 C, mm2/s, ASTM D445	2.6
Kinematic Viscosity @ -15 F, mm2/s, ASTM D445	130
Kinematic Viscosity @ 210 F, mm2/s, ASTM D445	3.6
Kinematic Viscosity @ -65 F, mm2/s, ASTM D445	1320
Potassium, ppm, ICPES/AA	38
Shear Stability, % Kinematic Viscosity Loss, 40 C, %, ASTM D5621	22
Sodium, ppm, ICPES	1
Specific Gravity, 25 C/25 C, ASTM D4052	0.996
Specific Heat Capacity, cal/g-deg.C, Reference	0.41
Sulfur, ppm, ICPES/XRF	224
Viscosity Index, ASTM D2270	280
Water Content, mass%, ASTM D6304	0.1
Foam, Sequence I, Tendency, ml, ASTM D892	27
Foam, Sequence II, Tendency, ml, ASTM D892	23
Foam, Sequence III, Tendency, ml, ASTM D892	28
Pour Point, °F, ASTM D97 / ASTM D5950	-80
NAS 1638 Class, HIAC, ISO 11500	7
Thermal Conductivity at 40 C, Cal / (cm s oC), Reference	0.00033

Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly.

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