TECHNICAL DATA SHEET

HFM

HM HYDRAULIC FLUID

HYDRAULIC RANGE HM
CATEGORY ISO-L-HM
ISO GRADE 15 TO 150

STANDARDS & SPECIFICATIONS
DENISON HF2 FOR GRADE 32, 46 and 68
EATON BROCHURE 3-401-2010

APPLICATIONS

Industrial **HFM** is a hydraulic fluid intended for all hydraulic systems including vane, screw or gear pumps, operating with high pressures (350 bars and more).

Gearing **HFM** is particularly suitable for lubrication of medially loaded spur gears.

BENEFITS

- **HFM** is available in a wide range of viscosity grades, from ISO grade 15 to ISO grade 150.
- **HFM** is an excellent oxidation resistant fluid, with a high **thermal stability**, increasing of service working lives, with perfect protection of equipment.
- **HFM** has an **excellent air release**, a **quick demulsibility** and a very high level anti-wear capability (DENISON HF2).

Its reinforced extreme pressure properties also enables lubrication of machine tool gearboxes and medially loaded gears.

PERFORMANCES

APPROVALS (1)	**HFM 32, 46 et 68** DENISON HF2 (approbation number : 646 (2))
PERFORMANCE LEVELS	ISO 11158 Category HM ISO 6743-4 Category HM NFE 48603 Category HM DIN 51524 Part 2 Catégory HLP EATON BROCHURE 3-401-2010

(1) Approval certificates available on request

CHARACTERISTICS

CHARACTERISTICS	UNITS	METHODS	TYPICAL DATA						
ISO grade	-	-	**15**	**22**	**32**	**46**	**68**	**100**	**150**
Specific gravity at 20°C	kg/m³	NF T 60-101	855	862	878	874	878	885	890
Kinematic viscosity at 40°C	mm²/s	NF T 60-100	16,2	23	32	45	68	105,8	152,9
Kinematic viscosity at 100°C	mm²/s	NF T 60-100	3,6	4,38	5,64	6,71	8,75	11,3	14,9
Viscosity index	-	NF T 60-136	114	97	105	102	100	93	97
Pour point	°C	NF T 60-105	-36	-33	-30	-27	-27	-21	-18
Flash point	°C	NF T 60-118	152	190	222	230	240	252	262
Aniline point	°C	NF M 07-021	88	90	98	101	102	105	
TAN	mg KOH/g	ASTM D 664	0,5						
Foaming sequence I	ml	NF T 60-129	0/0						
Copper corrosion	quotation	NF M 07-015	1a						
Anti rust test	-	NF T 60-151 A	Pass						
Hydrolytic stability 48h at 93°C	-	ASTM D 2619	Pass						
Oxidation resistance	hour	NF T 60-150	2000						
Thermal stability	-	CINCINNATI PROCEDURE	Pass						
FZG damage load stage	-	DIN ISO 14635-1	7		8	9	10		
AFNOR filterability dry, filterability index with 0.2 % water, filterability index	IF1 IF2	NF E 48-690 NF E 48-691	Pass Pass						

This typical data is given for information only

HEALTH, SAFETY AND ENVIRONMENT

Disposal must be carried out in accordance with regulations in effect for the disposal of used mineral oils.

Must be stored away from bad weather conditions.

For further details, our Technical Department can provide assistance if necessary