PRODUCT DATA

FMO-AW LUBRICANTS

"These products are certified OU Kosher Pareve"
"These products are Halal certified"

**NSF International H-1 & HT1 Registered*
NSF ISO21469 Certification

DESCRIPTION

The FMO-AW Series of Lubricants was developed to meet the ever-increasing demands of pressure, speed and temperature that are placed on modern food machinery. These premium food machinery lubricants are formulated with non-toxic, USP white mineral oils and are fortified with anti-oxidants, corrosion inhibitors, anti-wear agents and foam suppressants. The NSF International has registered them as H-1 lubricants, covering incidental contact with food. As such, they are acceptable as lubricants and anti-rust films on equipment and machine parts used in locations where there is exposure to edible products. These oils are all zinc-free.

APPLICATIONS

- ⇨ Hydraulics
- ⇨ Chains
- ⇨ Gearboxes
- ⇨ Air Line Lubricators
- ⇨ General Oiling

ADVANTAGES

- ⇨ Fortified with maximum strength antioxidant and are thermally and oxidatively stable.
- ⇨ Aerosol package utilizes SECURE STRAW DUAL SPRAY NOZZLE

APPROVALS

FMO-2400-AW & FMO-1100-AW have been tested and have passed the:

- ⇨ 12 Stage Four Square Gear (FZG) Test.

FMO-350-AW has passed the following hydraulic pump tests:

- ⇨ Vickers 35VQ25 Vane Pump Test
- ⇨ Vickers V-104C Vane Pump Test
- ⇨ Racine Model "S" Variable Volume Vane Pump Test

And meet the following specifications:

- ⇨ Vickers M-2950-S
- ⇨ Vickers I-286-S

FMO-200-AW has also been tested against and passed:

- ⇨ Racine Model "S" Variable Volume Vane Pump Test

**Registered H-1 by NSF International for use in food processing facilities as a lubricant or anti-rust agent on equipment in which there may be incidental contact involving the lubricated part and the edible product.*

*The **FMO-AW Series** contain no components derived from TSE/ BSE relevant animal species; therefore, they are compliant with the requirements of the TSE Note for Guidance EMA/410/01 Rev. 3 July 2011.*

Typical Test Data – See Back

PACKAGING AVAILABLE	85-AW	150-AW	200-AW
Carton, 12/1 Quart Plastic Jugs	L0880-054	L0879-054	***
Carton, 4/1 Gallon Plastic Jugs	L0880-057	L0879-057	L0881-057
5 Gallon Pail	L0880-060	L0879-060	L0881-060
16 Gallon Drum	L0880-061	L0879-061	L0881-061
55 Gallon Drum	L0880-062	L0879-062	L0881-062
Carton, 12/12 oz. Aerosol Cans	***	***	***
Carton, 12/14 oz. Plastic Bottles	L0880-067	***	***

PACKAGING AVAILABLE	350-AW	500-AW	900-AW
Carton, 12/1 Quart Plastic Jugs	***	***	***
Carton, 4/1 Gallon Plastic Jugs	L0882-057	L0883-057	L0884-057
5 Gallon Pail	L0882-060	L0883-060	L0884-060
16 Gallon Drum	L0882-061	L0883-061	L0884-061
55 Gallon Drum	L0882-062	L0883-062	L0884-062
Carton, 12/12 oz. Aerosol Cans	L0882-063	***	

PACKAGING AVAILABLE	1100-AW	1700-AW
Carton, 12/1 Quart Plastic Jugs	***	L0887-054
Carton, 4/1 Gallon Plastic Jugs	L0886-057	L0887--057
5 Gallon Pail	L0886-060	L0887--060
16 Gallon Drum	L0886-061	L0887--061
55 Gallon Drum	L0886-062	L0887--062

PACKAGING AVAILABLE	2400-AW	3800-AW
Carton, 12/1 Quart Plastic Jugs	***	***
Carton, 4/1 Gallon Plastic Jugs	L0885-057	L0888-057
5 Gallon Pail	L0885-060	L0888-060
16 Gallon Drum	L0885-061	L0888-061
55 Gallon Drum	L0885-062	L0888-062

****NSF International H-1 Registration No.'s** (Meets former USDA 1998 Guidelines)*

(85-AW)	(150-AW)	(200-AW)	(350-AW)	(500-AW)
122670	132661	122668	122665	122664
(900-AW)	**(1100-AW)**	**(1700-AW)**	**(2400-AW)**	**(3800-AW)**
122675	122687	122667	122671	122673

NSF International HT1 Registration No. (FMO-150-AW) 132661

PROPERTY	TEST METHOD	TYPICAL RESULTS				
		85-AW	**150-AW**	**200-AW**	**350-AW**	**500-AW**
Viscosity SUS @ 100°F	ASTM D-2161	102.3	146	195.9	347	545
Viscosity SUS @ 210°F	ASTM D-2161	39.5	43.6	47.5	55	70
Viscosity cSt @ 40°C	ASTM D-445	21.26	31.39	46.92	64.61	94.8
Viscosity cSt @ 100°C	ASTM D-445	3.95	5.41	6.92	8.52	11.03
Viscosity Index	ASTM D-2270	107	107	103	102	101
Color	ASTM D-1500	L0.5	L0.5	L0.5	L0.5	L0.5
Gravity	ASTM D-287	29.0	32.5	32.3	31.9	31.4
Flash Point	ASTM D-92	345°F/174°C	400°F/204°C	455°F/235°C	480°F/249°C	500°F/260°C
Fire Point	ASTM D-92	365°F/185°C	450°F/232°C	490°F/254°C	515°F/268°C	555°F/291°C
Pour Point	ASTM D-97	-30°F/-34°C	-20°F/-29°C	-15°F/-26°C	-10°F/-23°C	5°F/-15°C
Neutralization No.	ASTM D-2896	0.8	0.8	0.8	0.8	0.8
Aniline Point, °F	ASTM D-611	209	215	230	235	258
ISO Viscosity Grade	ASTM D-2422	22	32	46	68	100
AGMA No.		***	***	1	2	3
4-Ball Wear Test	ASTM D-2266	.43 mm	.39 mm	.41 mm	.36 mm	.38 mm
Turbine Oil Oxidation Test	ASTM D-5846	10,000+	Pending	10,000+	10,000+	10,000+
		900-AW	**1100-AW**	**1700-AW**	**2400-AW**	**3800-AW**
Viscosity SUS @ 100°F	ASTM D-2161	856	1126	1730	2350	3864
Viscosity SUS @ 210°F	ASTM D-2161	83	97	120	142	198
Viscosity cSt @ 40°C	ASTM D-445	163.5	206.7	300.7	428.9	700.1
Viscosity cSt @ 100°C	ASTM D-445	16.09	18.47	23.25	29.62	40.98
Viscosity Index	ASTM D-2270	102	99	96	98	98
Color	ASTM D-1500	L0.5	L0.5	L0.5	L0.5	0
Gravity	ASTM D-287	31.0	30.5	29.5	28.6	28.3
Flash Point	ASTM D-92	475°F/246°C	455°F/235°C	440°F/227°C	445°F/229°C	425°F/218°C
Fire Point	ASTM D-92	530°F/277°C	510°F/266°C	490°F/254°C	490°F/254°C	475°F/246°C
Pour Point	ASTM D-97	5°F/-15°C	10°F/-12°C	10°F/-12°C	15°F/-10°C	20°F/-7°C
Neutralization No.	ASTM D-2896	0.8	0.8	0.8	0.8	0.8
Aniline Point, °F	ASTM D-611	259	262	265	269	275
ISO Viscosity Grade	ASTM D-2422	150	220	320	460	680
AGMA No.		4	5	6	7	8
4-Ball Wear Test	ASTM D-2266	.38 mm	.38 mm	.38 mm	.38 mm	.38 mm
Turbine Oil Oxidation Test	ASTM D-5846	10,000+	10,000+	10,000+	8,000+	5,000+

STORAGE RECOMMENDATIONS

- ⇨ Products should be stored between 40°F-120°F
- ⇨ Products should be stored in a dry covered environment
- ⇨ Products should not be stored in warm, direct sunlight
- ⇨ Improper storage conditions can significantly alter the shelf life of the product. Such conditions would include temperature, moisture, open containers, etc.