

# HYDRAULIC HM 32, 46, 68, 100

## ANTI-WEAR HYDRAULIC FLUID

**BULWARK HYDRAULIC HM** series is formulated with highly refined paraffinic base oils and provide excellent anti-wear protection, oxidation, corrosion inhibition and demulsibility, as well as aeration and foam suppression. In general, hydraulic systems due to the nature of their operation, experience accelerated wear and need to be protected by super clean, high quality anti-wear hydraulic oils.

**BULWARK HYDRAULIC HM** oils are high quality, anti-wear fluids available in ISO VG 32, 46, 68 and 100 and recommended for use on applications such as hydraulic systems with vane, piston or gear-type pumps, especially where typical pressure range at source exceeds 700psi. They can also be used to lubricate lightly loaded reciprocating compressors.

### PERFORMANCE LEVEL\*

- DIN 51524-2
- ISO 11158 L-HM, HV
- ASTM D 6158 HM, HV
- Eaton-Vickers 35VQ25A for M-2950-S (Mobile) and I-286-S (Stationary),
- Parker Hannifin (Denison) HF-0, HF-1, HF-2.
- Cincinnati Machine P-68, P-69, P-70.
- AFNOR NF E 48-603 HM, HV

### KEY BENEFITS

- All BULWARK hydraulic grades meet the requirements of leading hydraulic system manufacturers
- Excellent oxidation stability provides good service life in high pressure service.
- Excellent protection against corrosion of both copper and steel
- Minimum viscosity change over a wide temperature range.
- The special foam suppressant minimizes both foaming and aeration problems.

### TYPICAL CHARACTERISTICS\*\*

Properties	Test Methods	32	46	68	100
Specific Gravity @ 15 °C	ASTM D4052	0.881	0.882	0.886	0.889
Kinematic Viscosity @ 40 °C cSt	ASTM D445	31.50	46.00	65.10	98.70
Viscosity Index	ASTM D2270	124	124	122	120
Flash Point, COC, °C	ASTM D92	226	228	234	246
Pour Point, °C	ASTM D97	-33	-30	-30	-27
TAN mg KOH/g	ASTM D974	0.42	0.42	0.42	0.42
Foaming Tendency/Foam Stability	ASTM D892				
Seg I		0/0	0/0	0/0	0/0
Seg II		0/0	0/0	0/0	0/0
Seg III		0/0	0/0	0/0	0/0
Color	ASTM D1500	L1.0	L1.5	L2.0	L2.5
Oxidation (TOST)	ASTM D943	>3000	>2500	>2500	>2000

\* Performance levels indicated may include licensed API specs or specs that our products meet or exceed

\*\* Typical Characteristics are typical values. Minor variations within the permissible tolerance limits may be expected on the final product.

### STORAGE

All packages should be stored under cover. Where outside storage is unavoidable, drums should be laid horizontally to avoid the possible ingress of water and the obliteration of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

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