



## MAKER TELEX E

### Description

These oils are specially designed for use in hydraulic circuits requiring lubricants with marked anti-wear properties. Manufactured from carefully selected bases with specific to notably enhance their properties.

They are specially suitable for hydraulic circuits and civil works machines equipped with any type of pump, particularly working under high pressures and, in general for all kinds of mechanisms requiring stable oils and in those in which the maximum anti-wear levels required by international standards must be attained and exceeded.

### Properties

- High resistance to oxidation and sludge formation.
- High deaeration capacity.
- High viscosity index.
- Very good anti-foam and anti-rust properties.
- Excellent water separation.
- Excellent filterability.
- Very good compatibility with joints and retainers.
- Maximum anti-wear level.
- Excellent load capacity.
- High thermal and hydrolytic stability.

### Quality levels, approvals and recommendations

- ABB Turbocharger VTR304-11 / -21 (68)\*
  - AFNOR NF ISO 11158 HM, 48-690, 48-691
  - BATTENFELD Inyectoras (32, 46)
  - BOSCH REXROTH RDE 90235 (32, 46, 68)
  - DANIELI STANDARD N. 0.000.001 - REV.15 (46, 68)\*
  - DIN 51524-HLP
  - EATON VICKERS I-286-S Y M2950-S
  - ENGEL Engel Injection Moulding Machines (46)\*
  - FIVES CINCINNATI P-68 (32)
  - FIVES CINCINNATI P-69 (68)
  - FIVES CINCINNATI P-70 (46)
  - GIA CLECIM PRESS GIA Sistema de extrusion de tochos (46, 68)\*
  - IBERCISA Hidráulicos (32, 46)\*
  - IMS DELTA MATIC IMS DELTA MATIC (32, 46, 68)\*
  - ISO 6743/4 HM, 11158 HM
  - NEGRI BOSSI ELEOS, eCANBIO JANUS Y VESTA series (46)\*
  - ORTLINGHAUS Standard ON 9.2.19 (46)\*
  - PARKER DENISON HF0, HF1, HF2 (32, 46, 68)\*
  - THYSSENKRUPP 3,4 y 5 (Hidraulicos HLP) (32, 46, 68)\*
  - VOITH Voith Turbo Variable Speed Drives (22, 32, 46)\*
- \*Formal approval

**MAKER TELEX E****Technical specifications**

|                                    | UNIT     | METHOD     | VALUE |       |       |       |       |            |
|------------------------------------|----------|------------|-------|-------|-------|-------|-------|------------|
| ISO Viscosity Grade                |          |            | 15    | 22    | 32    | 46    | 68    | 100        |
| Density at 15 °C                   | g/cm3    | ASTM D4052 | 0.861 | 0.867 | 0.874 | 0.880 | 0.884 | 0.887      |
| Kinematic viscosity at 40 °C       | cSt      | ASTM D445  | 15    | 22    | 32    | 46    | 68    | 100        |
| Kinematic viscosity at 100 °C      | cSt      | ASTM D445  | 3.4   | 4.4   | 5.4   | 6.8   | 8.5   | 11.0       |
| Viscosity index                    | -        | ASTM D2270 | 113   | 107   | 100   | 98    | 98    | 97         |
| Air release at 50 °C               | min      | ASTM D3427 | 1     | 1     | 1.5   | 2.4   | 3.6   | 6          |
| Corrosion Cu, 3hrs 100 °C          | -        | ASTM D130  | 1a    | 1a    | 1a    | 1a    | 1a    | 1a         |
| Flash point, open cup              | °C       | ASTM D92   | 198   | 210   | 226   | 231   | 246   | 264        |
| FZG (A/8,3/90): Failure load stage | -        | ISO 14635  | -     | -     | 12    | 12    | 12    | 12         |
| Pour point                         | °C       | ASTM D97   | -27   | -27   | -24   | -24   | -24   | -21        |
| RPVOT                              | min      | ASTM D2272 | 400   | 400   | 400   | 400   | 400   | 400        |
| Rust, Methods A and B              | -        | ASTM D665  | Pass  | Pass  | Pass  | Pass  | Pass  | Pass       |
| TAN                                | mg KOH/g | ASTM D664  | 0.38  | 0.38  | 0.38  | 0.38  | 0.38  | 0.38       |
| Water separability at 54 °C        | min      | ASTM D1401 | <20   | <20   | <25   | <30   | <45   | <30(82 °C) |

The above mentioned characteristics are typical values and should not be considered product specifications.