



## MAKER LIBRA HYDRAULIC HLP

### Description

The lubricants of this range are specially designed for use in hydraulic circuits requiring fluids with anti-wear properties. They are manufactured from a mixture of selected mineral bases and high-quality regenerated bases, carefully treated and purified, and specific additives have been selected to enhance their anti-wear properties.

These new oils, in addition to being environmentally friendly, offer the same quality as any other HLP category lubricant on the market. Moving forward in Repsols commitment with sustainable development, this product range complies with the waste management hierarchy and is the link that completes the ecological chain of manufacturing, use, collection and recovery of used oils.

These oils are specially suitable for most hydraulic circuits, including those requiring special anti-wear protection, both in industry and motoring (dumpers, civil works machines, etc.), regardless of the type of pump with which they are equipped and pressures under which they work.

### Properties

- Resistance to oxidation, ageing and sludge formation.
- Low pour point.
- High viscosity index.
- Compatible with joints.
- Good anti-foam properties.
- Marked anti-wear properties.
- Easy water separation.

### Quality levels, approvals and recommendations

- DIN: 51524-HLP
- ISO: 6743/4 HM, 11158 HM



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## Technical specifications

|                                    | UNIT  | METHOD     | VALUE    |          |          |
|------------------------------------|-------|------------|----------|----------|----------|
| ISO Viscosity Grade                |       |            | 32       | 46       | 68       |
| Kinematic viscosity at 100 °C      | cSt   | ASTM D445  | 5,4      | 6.9      | 8.6      |
| Kinematic viscosity at 40 °C       | cSt   | ASTM D445  | 32       | 46       | 68       |
| Viscosity index                    |       | ASTM D2270 | 102      | 105      | 97       |
| Flash point, open cup              | °C    | ASTM D92   | 205      | 210      | 210      |
| Pour point                         | °C    | ASTM D97   | - 21     | -21      | - 18     |
| Corrosion Cu, 3hrs 100 °C          |       | ASTM D130  | 1a       | 1a       | 1a       |
| Water separability at 54 °C        | min   | ASTM D1401 | 15       | 20       | 20       |
| Foams: Sec I, II, III formation    | mL    | ASTM D892  | 50/75/50 | 50/75/50 | 50/75/50 |
| Foams: Sec I, II, III, stability   | mL    | ASTM D892  | 0/0/0    | 0/0/0    | 0/0/0    |
| FZG (A/8,3/90): Failure load stage |       | ISO 14635  | 11       | 11       | 11       |
| Density at 15 °C                   | g/cm3 | ASTM D4052 | 0.857    | 0.867    | 0.879    |

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