

Molybdenum (ML (MoLa))

Molybdenum alloyed with lanthanum oxide has advantages over pure molybdenum:

- 1) Lower cold shearing threshold, so easier machining at room temperature
- 2) Higher tensile strength
- 3) Greater resistance to deformation at high temperature

| Element | Mass percentage |
|---------------------------|-----------------|
| Mo | |
| La | 0,40 ± 0,07% |
| Impurities, ppm, maximum | |
| Fe | 100 |
| Al | 30 |
| Ni | 50 |
| Si | 50 |
| Mg | 20 |
| Na | 30 |
| K | 80 |
| Ca | 40 |
| W | 130 |
| Total metallic impurities | 500 |
| C | 100 |

Sample actual characteristics of MoLa-PM rolled sheet and forged rods

| Material | Test temperature, °C | Tensile strength (kgf/ mm ²) | Relative elongation δ , % |
|---------------------------|----------------------|--|----------------------------------|
| Sheet Mo-La-PM 2.0–3.0 | 20 | 88–98 | 10–12 |
| Rod Mo-La-PM Ø 9.5 | 20 | 74–75 | 30–35 |
| Rod Mo-La-PM Ø 20 | 1400 | 8.2–9.0 | 31–39 |
| | 1800 | 6.3 | 9.2 |