

MPO version 3.0 – September 2026

VERSION 3.0 (September 2026)

- Improved robustness of room-temperature strength calculations for aluminium alloys in the T5 and T6 conditions
- Improved description of thermodynamic and physical properties for cast aluminium alloys in the T5 and T6 conditions
- Implemented calculation of high-temperature yield stress for aluminium alloys, general steels, and Ni- and NiFe-based superalloys
- Added a heat treatment route for the calculation of thermodynamic, physical and mechanical properties of general steels
- Extended design space to include tempering temperature and tempering time as processing variables in the case of general steels (heat treatment route)
- Extended objective space to include stacking fault energy (for steels, Co and Ni alloys) and gamma/gamma' mismatch (for Ni alloys only)
- Extended custom properties to allow expressions defined as a function of built-in properties
- Added resizable data viewer window supporting multiple plots for side-by-side comparison
- Added support for plotting constraints in addition to objective values
- Added the ability to select multiple points in display charts
- Added dialog to display key statistics for either the full dataset or a selection of points.
- Extended export functionality to allow output of data in tabular format
- Removed check on element costs to allow for negative values
- Updated default element costs with more recent values sourced from Wikipedia
- Updated the thermodynamic and properties databases to match those included in JMatPro® v16.0
- Fixed calculation of single crystal stiffness coefficients and anisotropic Young's modulus via casting route
- Fixed incomplete export caused by encoding of special characters when saving chart as image file using PDF, PS and EPS formats

