

JMatPro

PRACTICAL SOFTWARE FOR MATERIALS PROPERTIES

Overview of Material Property Optimiser

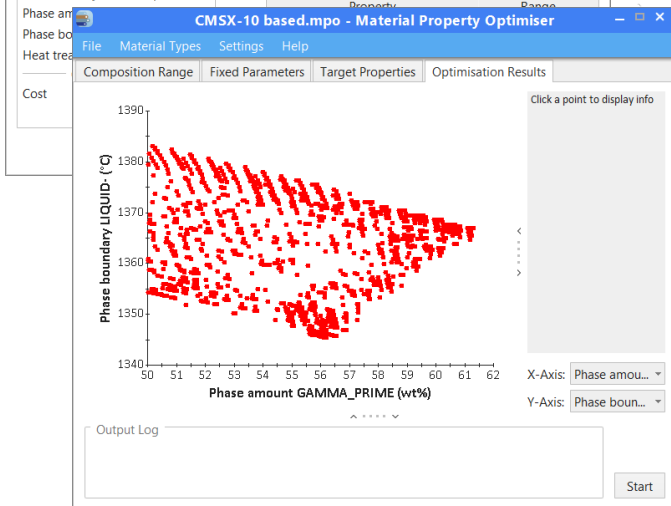
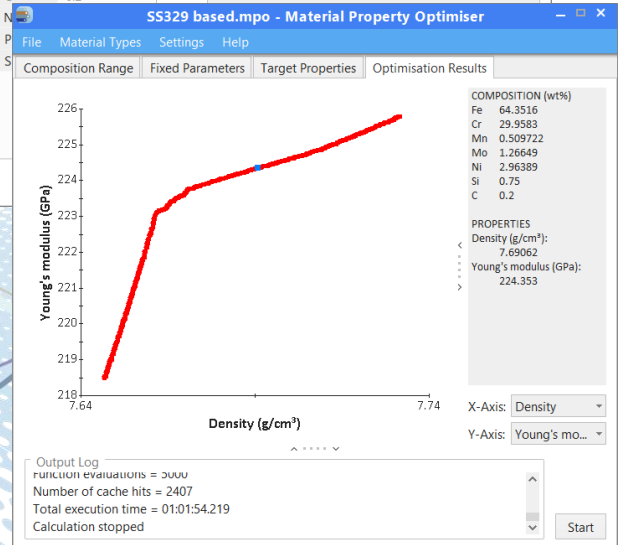
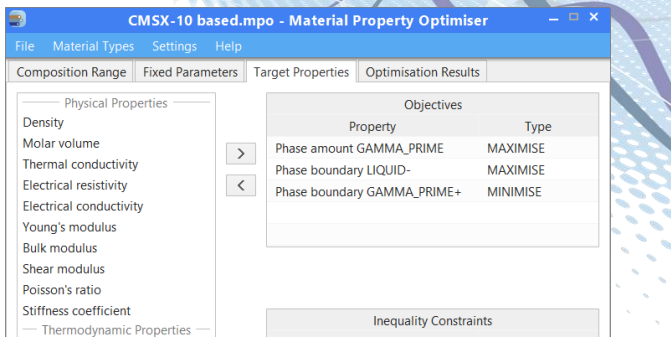
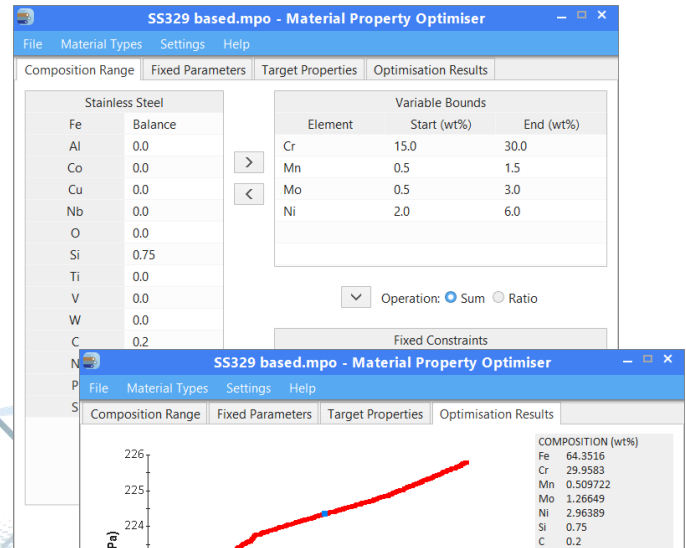
The **Material Property Optimiser** is a powerful optimisation tool for the design of multicomponent alloys. It builds upon the calculation engine behind **JMatPro®** by combining it with a multi-objective optimisation method. It allows you to perform calculations aimed at identifying optimal values of decision variables that lead to desired material properties.

Capabilities of Material Property Optimiser

Design space: alloy composition

Objective space: thermo-physical properties derived from **JMatPro®** calculations along with alloy cost

- Phase amounts and boundaries
- Heat treatment window for Al, Mg, and Ni alloys
- Density and molar volume
- Thermal conductivity
- Electrical conductivity and resistivity
- Young's, bulk, and shear moduli
- Poisson's ratio
- Single crystal stiffness coefficients



Benefits of Material Property Optimiser

- Extensively validated **JMatPro®** calculations ensure reliable, robust and consistent material property predictions
- Efficient exploration of design space allows you to identify trade-offs and focus on the most promising alloy compositions
- Intuitive and user-friendly interface ensures you can get results quickly
- Powerful tool to accelerate development of new or improved alloys, whilst reducing the need for costly experiments

For local agents and representatives, please visit our website:

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