

## **The Fulmer Materials Optimizer**

The Fulmer Materials Optimizer (FMO) was published by the Fulmer Research Institute in 1974 and consisted of three volumes:

- Volume 1 Comparative Properties of Materials (Metals, Plastics and Ceramics) and related component Manufacturing Processes.
- Volume 2 Properties of Metals.
- Volume 3 Properties of Non-metals – Plastics and Ceramics.

It was published in loose leaf form to facilitate updating.

The aim of the FMO was to allow design engineers to select and specify materials and manufacturing methods that would fulfil the design functions of an engineering component and permit economic manufacture. Throughout the 3 volumes extensive use was made of tabular and graphical information to facilitate the comparison of candidate materials for a specific application.

Every material and manufacturing method was described in terms of what it will do for the component designer and product maker and no detailed knowledge of metallurgy, polymer chemistry or materials science was assumed or necessary.

The information was arranged in order of increasing detail so that no section of the FMO need to be read unless it was likely to be of direct relevance to the reader and his quest, whether it was the selection of a material for a new product or the search for a suitable substitute material.

The Fulmer Materials Optimizer and the Updates were sold to customers in the UK and Europe, the USA, Australia, South Africa, China, Japan, and the USSR.

In 1988 Elsevier Applied Science acquired the rights to publish the FMO in the form of a three- volume materials selection system edited by in collaboration with Professor Michael Ashby FRS and including the Ashby maps for comparing materials properties.

In 1993 Chapman & Hall purchased the book publishing business of Elsevier Applied Science, and after further updating and editing, supervised by Norman Waterman and Michael Ashby the FMO was published as the Materials Selector in 1997.

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