

# **From polymers to plastics**



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A.K. van der Vegt

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# Preface

The two words in the title of this book, “polymers” and “plastics”, could be considered as referring to two different worlds.

In the world of polymers, the properties of chain molecules are in the focus of attention, and are subject of thorough theoretical studies.

In the world of plastics, the end-use performance of the technically used materials counts, as well as their behaviour in the various processing operations in which they are transformed into finished articles.

Nevertheless, these two worlds are closely related to each other. The typical behaviour of plastics materials, strongly deviating from other materials, can only be understood on the basis of the chain properties.

In this book an attempt has been made to give a survey of polymer properties, and of the way these are, on the one hand, governed by their molecular structure, and are, on the other hand, responsible for the technological behaviour of plastics materials.

As a result of this intention, cross-references are given throughout the whole book: every aspect of polymer science and of plastics technology is closely related to practically every other aspect!

This book originates from several series of lectures at the Delft University of Technology during the years 1978 - 1988, later on integrated into a number of post-graduate and other courses. Since only a first introduction is given, more detailed treatment and more scientific depth have been sacrificed to the striving for survey and integration.

Delft, May 2001  
A.K. van der Vegt

## *Note from the publisher*

Just before he died in April 2002, Professor Em. Anne van de Vegt made a translation of his successful Dutch textbook on polymer science and technology “Polymeren, van keten tot kunststof”. Initially we published this translation only on the internet, but decided that it would be worthwhile to publish it in print as so many students and professionals took the trouble to let us know that an affordable edition on paper would be most welcome. So, we are very pleased to be able to publish Anne’s much acclaimed text. We included the - initially separate - collection of problems as well, inserted at the end of each chapter.

J.S.  
January 2006



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Solutions to the problems can be downloaded from <http://www.vssd.nl/hlf/m028.htm>