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Preface, Foreword, and Notes for Using Handbook VII

Includes examples for both novices and experts for how to search the figures that show damage patterns with explanatory captions and notes for students on special technical words in the definitions chapter.

1. Technical Glossary of Quality and Damage Terms 1

Contains over 2620 technical words, arranged alphabetically, from many areas of plastics technology: references to definitions (Chapter 2), figure numbers of the corresponding quality and damage figures (Chapter 3), the type of plastic, processing, and molded part designation, and the contrast method used.

2. Definitions of Terms in the Technical Glossary 75

This chapter contains technical words, arranged alphabetically, from the Technical Glossary with explanations (definitions), connections (arrows) to related terms, damage causes, and damage avoidance.

3. Quality and Damage Figures 145

As the main part of the book, this chapter contains 588 figures from many areas of plastics technology, with exact explanations of causes of the damage, arranged in 74 historically compiled subchapters. Each page has two figures with biological, electrical, mechanical, physical, or thermal attributes from the areas of plastics processing and application, weathering, colorimetry, and gloss measurement. A "brief expert opinion" is provided, with causes of the damage, damage avoidance, contrast techniques, enlargement, type of plastic, molded part designation, figure numbers, and the keywords from the technical glossary. The analyses were performed with various optical microscopes and a scanning electron microscope.

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Table 1: plastics used in the glossary with abbreviations; Table 2: literature references; and Table 3: contrast types in microscopy.