

Contents

Introduction	1
CHAPTER 1 Definitions	3
1.1 BACKGROUND	3
1.2 ISO 9211-1: DEFINITIONS	3
1.3 OTHER COATING STANDARDS	5
1.4 SUMMARY OF CHAPTER 1	9
CHAPTER 2 Optical Properties	10
2.1 BACKGROUND	10
2.2 ISO 9211-2: OPTICAL PROPERTIES AND CONDITIONS— STANDARD FORMAT	10
2.3 GRAPHICAL REPRESENTATION OF SPECTRAL CHARACTERISTICS	10
2.4 OTHER COATING STANDARDS	12
2.5 SUMMARY OF CHAPTER 2	15
CHAPTER 3 Environmental Durability	16
3.1 BACKGROUND	16
3.2 ISO 9022: ENVIRONMENTAL TEST METHODS—GENERAL	16
3.3 ISO 9211-3: ENVIRONMENTAL DURABILITY	17
3.4 OTHER COATING DURABILITY STANDARDS	18
3.5 SUMMARY OF CHAPTER 3	21
CHAPTER 4 Specific Test Methods	22
4.1 BACKGROUND	22
4.2 ISO 9211-4: SPECIFIC TEST METHODS	22
4.3 OTHER COATING STANDARDS	23
CHAPTER 5 Conclusion	26
APPENDIX	27
A.1 COATING INDICATIONS IN DRAWINGS	27
A.2 ENVIRONMENTAL REQUIREMENTS—SUMMARY	27
A.3 COATING IMPERFECTION SPECIFICATIONS	28
Tables and Figures	
Table 1 Functional Categories of Coatings	5
Table 2 Optical Properties and Conditions	11
Table 3 Reflectance Values	15
Figure 1 Illustrations of common types of coating imperfection	6
Figure 2 V-W Spectrophotometer path for absolute reflectance test	10
Figure 3 Graphical representation of a filtering function	12
Figure 4 Measured and plotted filter data with slope calculations	13
Figure 5 Single layer AR-coating reflectance specification	15
Figure 6 Visual inspection method	23
Figure 7 Scatter angle	24
Figure 8 Stray light test schematic	24
Figure A1 Notes	27
Symbols and Abbreviations	29