
TABLE OF CONTENTS

1.0 INTRODUCTION	1
2.0 FUNCTIONS OF FLOORING SYSTEMS	1
3.0 COMPONENTS OF FLOORING SYSTEMS	1
4.0 RELATIONSHIP BETWEEN THE FLOORING SYSTEM AND FOOTWEAR	2
5.0 BENEFITS OF FLOORING SYSTEMS	2
6.0 LIMITATIONS OF FLOORING SYSTEMS	2
7.0 APPLICATIONS FOR FLOORING SYSTEMS	3
8.0 TYPES OF FLOORING SYSTEMS	3
8.1 PERMANENT FLOORING SYSTEMS.....	3
8.1.1 <i>Vinyl Tile and Sheet</i>	3
8.1.2 <i>Rubber Tile and Sheet</i>	3
8.1.3 <i>Interlocking Tile</i>	4
8.1.4 <i>Vinyl Composite Tile</i>	4
8.1.5 <i>Carpeting and Carpet Tile</i>	4
8.1.6 <i>High-Pressure Laminates</i>	5
8.1.7 <i>Raised Access Flooring Systems</i>	5
8.1.8 <i>Epoxy and Polymeric Overlayments</i>	6
8.1.9 <i>Urethane Cementitious Screeds</i>	6
8.1.10 <i>Concrete/Dryshakes/Cementitious Toppings</i>	7
8.1.11 <i>Standard Concrete</i>	7
8.2 SEMI-PERMANENT OR NON-PERMANENT SYSTEMS	7
8.2.1 <i>Floor Mats</i>	8
8.2.2 <i>Floor Runners</i>	8
8.2.3 <i>Floor Finishes</i>	8
8.2.4 <i>Topical Antistats</i>	8
8.2.5 <i>Paints and Coatings</i>	8
8.3 SUMMARY OF FLOORING SYSTEM TYPES	9
9.0 FLOORING SYSTEM EVALUATION CONSIDERATIONS	11
9.1 ELECTRICAL PROPERTIES.....	11
9.2 INSTALLATION CONSIDERATIONS.....	12
9.3 MAINTENANCE CONSIDERATIONS.....	12
9.4 PHYSICAL AND MECHANICAL PROPERTY CONSIDERATIONS	12
9.4.1 <i>Slip Resistance</i>	12
9.4.2 <i>Chemical and Solder Resistance</i>	12
9.4.3 <i>Abrasion Resistance and Durability</i>	13
9.4.4 <i>Resistance to Heavy Traffic</i>	13
9.4.5 <i>Outgassing</i>	13

9.4.6 Humidity Dependence.....	13
9.4.7 Moisture Sensitivity.....	13
9.5 APPLICATION AND FACILITY CONSIDERATIONS.....	13
9.6 SAFETY CONSIDERATIONS.....	13
9.7 COST CONSIDERATIONS.....	14
9.8 PERFORMANCE MONITORING CONSIDERATIONS.....	14
9.9 CLEANROOM CONSIDERATIONS.....	14
9.10 AESTHETIC CONSIDERATIONS.....	14
9.11 SUMMARY OF FLOORING SYSTEM EVALUATION CONSIDERATIONS.....	14
10.0 INSTALLATION ISSUES.....	16
10.1 SUB-FLOOR PREPARATION.....	16
10.2 MOISTURE.....	16
10.3 ADHESIVES.....	17
11.0 GROUNDING.....	17
12.0 TEST METHODS.....	20
12.1 ELECTRICAL RESISTANCE.....	20
12.1.1 Characterization of Flooring Systems as Conductive or Dissipative.....	20
12.2 RESISTANCE MEASUREMENT IN COMBINATION WITH A PERSON.....	21
12.3 RESISTIVITY.....	21
12.4 VOLTAGE MEASUREMENT IN COMBINATION WITH A PERSON.....	21
12.5 STATIC DECAY.....	22
13.0 BIBLIOGRAPHY.....	22

Annexes

Annex A (Informative) – Revision History for ESD TR7.0-01.....	23
--	----

Tables

Table 1: Flooring Systems Comparison.....	9
Table 2: Flooring System Evaluation Considerations.....	15

Figures

Figure 1: Raised Access Floor System.....	6
Figure 2: Commonly Accepted Grounding Methods.....	18
Figure 3: Floor Electrical Ground Bonding Detail.....	19
Figure 4: Copper Electrical Bond Strap Installation Detail.....	20