

# DIN EN ISO 9455-17:2024-04 (E)

## Soft soldering fluxes - Test methods - Part 17: Surface insulation resistance comb test and electrochemical migration test of flux residues (ISO 9455-17:2024 )

---

<b>Contents</b>		<b>Page</b>
<b>European foreword</b>	.....	<b>3</b>
<b>Foreword</b>	.....	<b>4</b>
<b>1 Scope</b>	.....	<b>5</b>
<b>2 Normative references</b>	.....	<b>5</b>
<b>3 Terms and definitions</b>	.....	<b>5</b>
<b>4 Principle</b>	.....	<b>5</b>
<b>5 Reagents</b>	.....	<b>6</b>
<b>6 Apparatus</b>	.....	<b>6</b>
<b>7 Inspection of test coupons</b>	.....	<b>12</b>
7.1 Surface plating	.....	12
7.1.1 Slivering (thin metal overhang on etch runs)	.....	12
7.1.2 Plating nodules	.....	13
7.1.3 Plating pits	.....	13
7.2 Surface laminate	.....	13
<b>8 Sample preparation</b>	.....	<b>13</b>
8.1 Preparation of the flux test solution	.....	13
8.1.1 Liquid flux samples	.....	13
8.1.2 Solid flux samples	.....	13
8.1.3 Flux-cored solder wire or preform samples	.....	13
8.1.4 Solder paste samples	.....	14
8.1.5 Paste flux samples	.....	14
8.2 Preparation of the test coupons	.....	14
8.2.1 Sample identification	.....	14
8.2.2 Test coupons	.....	14
8.2.3 Test coupon pre-cleaning	.....	15
<b>9 Procedure</b>	.....	<b>15</b>
9.1 Methods for connecting test coupons	.....	15
9.1.1 Board circuitry layout	.....	15
9.1.2 Preconditioning of SIR test coupons prior to processing (optional)	.....	17
9.2 Fluxing and soldering test patterns	.....	17
9.2.1 Liquid and solid flux samples and flux-cored solder wire samples	.....	17
9.2.2 Soldering using wave solder system	.....	17
9.2.3 Soldering using static solder pot	.....	17
9.2.4 Solder paste samples	.....	18
9.2.5 Paste flux samples	.....	18
9.3 Cleaning	.....	18
9.4 SIR measurement	.....	19
9.4.1 High-resistance measurement system verification	.....	19
9.4.2 Test coupon measurements	.....	19
9.5 Electrochemical migration test	.....	19
<b>10 Assessment</b>	.....	<b>20</b>
<b>11 Precision</b>	.....	<b>20</b>
<b>12 Test report</b>	.....	<b>20</b>

<b>Annex A (informative) SIR testing guidance</b> .....	<b>22</b>
<b>Annex B (informative) Surface insulation resistance comb test and electrochemical migration test of flux residues — Qualification test report</b> .....	<b>24</b>
<b>Bibliography</b> .....	<b>26</b>