

ISO/TR 17350:2013-06 (E)

Direct Marking on Plastic Returnable Transport Items (RTIs)

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms, definitions and abbreviations	1
4	Types of Returnable Transport Items (RTIs)	1
4.1	Pallets	1
4.2	Sheet pallet (Slip sheet)	4
4.3	Returnable boxes	4
4.4	Partitions	7
5	Unique identifier of Returnable Transport Items (RTIs)	8
5.1	Data field identification	8
5.2	Maximum data length	8
5.3	Character set	8
5.4	Data structure	8
6	Marking method	9
6.1	Label	9
6.2	Direct marking	9
7	Two-dimensional symbology requirements	10
7.1	QR Code requirements	10
7.2	Data Matrix requirements	13
8	Experimental Test 1	14
8.1	Objective	14
8.2	Test sample	14
8.3	Marker	15
8.4	Two-dimensional symbol	15
8.5	Marked data	16
8.6	Reader	16
8.7	Evaluation results	16
8.8	Considerations	16
9	Experimental Test 2	17
9.1	Objective	17
9.2	Test sample	17
9.3	Marker	19
9.4	Two-dimensional symbol	20
9.5	Marked data	20
9.6	Reader (evaluation device)	20
9.7	Reading evaluation method	20
9.8	Evaluation results	21
9.9	Considerations	22
10	Experimental Test 3	23

10.1	Objective	23
10.2	Test sample	23
10.3	Markers	25
10.4	Two-dimensional symbol	26
10.5	Marked data	26
10.6	Evaluation Device	26
10.7	Evaluation Methods	26
10.8	Evaluation results	27
10.9	Conclusion of evaluation results	27
Annex A (informative)	Example of serial numbers (SNs)	29
Annex B (informative)	Example of structured data	31
Annex C (informative)	Specification of the hand-held scanner used to read DPM symbols	33
Annex D (informative)	Specification of a hand-held terminal	36
Annex E (informative)	Specification of the fixed scanner used	38
Annex F (informative)	Specification of LED light for the fixed scanner used	40
Annex G (informative)	Specification of the verifier used	42
Annex H (informative)	Specification of LED light for the verifier used	44
Annex I (informative)	Specification of the FAY blaser used	47
Annex J (informative)	Specifications of a CO₂ laser	50
Annex K (informative)	Specification of a dotpeen marker	52
Annex L (informative)	Types of LED lights	54
Annex M (informative)	Evaluation results on Samples A	56
Annex N (informative)	Evaluation results on Samples B	59
Annex O (informative)	Evaluation results on Samples C	62
Bibliography		64