

# **ANNEXURE A SPECIFICATION**

## **ITix TICKET MATERIAL**

### **PHYSICAL DIMENSIONS OF TICKET MATERIAL ON ROLLS FOR USE ON THE PRINTRONIX SL/T4M PRINTERS**

The paper ticket material will be supplied in continuous rolls, without joints, splices or breaks, and wound onto a central circular core.

#### **1. Core Dimensions**

1.1 The inner core of the roll will have the following dimension:

- Inner diameter : 76 mm
- Core thickness : 5 mm
- External diameter : 86 mm
- Width : 86.5 mm

1.2 The core of the roll will preferably be made of a cardboard material suitable for the purpose and will not be deformed or collapse under normal conditions of transport or storage.

1.3 The material must not be attached with sticky tape to the inner core.

#### **2. ITix Roll Dimensions**

2.1 The material will be wound evenly on the core and with sufficient tension, so as to prevent telescoping with normal handling.

2.2 The ticket material will be wound on to the inner core in the following direction:

- With the roll resting on a horizontal surface, and viewed from the top, the material will be wound in a clockwise direction with the conditions of transport facing to the inside (reverse side) and the printing surface facing outward.

2.3 A black line of 3 mm must be printed across the width of the ticket material every 54mm.

2.4 The thickness of the ticket material will be 0,250 mm  $\pm$  0,025 mm. The thickness should be measured as per BS 3983 part 2 of 1982 (ISO 534 1980).

2.5 The mass of the material will be 220-g/m<sup>2</sup>  $\pm$  10 g/m<sup>2</sup>.

2.6 Roll Dimensions

2.6.1 The external diameter of a fully wound roll will be 203 mm  $\pm$  1 mm.

2.6.2 The width of the ticket material roll must be 86.5mm.

2.6.3 The length of the material on a roll will be 100 meters.

Note: The width of the ticket will be 54 mm ± 0,4 mm The length of ticket will be 86,5 mm ± 0,7 mm.

## **GENERAL DESCRIPTION of ITix TICKET MATERIAL**

### **1 Construction**

- 1.1 The ticket material may be either of a single or multiple layer construction. Where multiple layers are used, the layers will not separate under normal use.
- 1.2 The face and reverse side of the ticket will be suitable for accepting printed information.
- 1.3 Both sides of the ticket may be required to carry pre-printed information and/or background printing.
- 1.4 The material will be supplied in continuous rolls, without joints, splices or breaks and wound onto a central circular core.
- 1.5 The final acceptability of the material will be determined by the performance of the tickets in service.

### **2 Quality of Material**

- 2.1 The base material will be free of holes, electrically, magnetically and thermally conductive particles, loose dust, loose powder, fuzz, residue chemicals and slime spots likely to damage or impede the operation of the printing machines or readers.
- 2.2 The base material will be free of joints, cracks, high spots, burrs, splinters, sharp edges and dents.
- 2.3 The base material will be free of any translucent areas or spots that could affect the operation of optical sensors.
- 2.4 The base material will be free of any wrinkles or creases.
- 2.5 The ticket materials will not cause injury either by contact, inhalation or ingestion.
- 2.6 The base material will be free of any other defect not listed above, which might detract from the magnetic printing, general performance or appearance of the final product.
- 2.7 The characteristics of the material should be such that dirt accumulation and wear of the machines should be restricted to a minimum; hence the material must be capable of being cleanly cut without forming dust or burring.
- 2.8 The material should be treated to prevent the generation of static sufficient to impair it's serviceability.

- 2.9 The ticket material will be unaffected by magnetic fields, and will retain no detectable residual magnetism.
- 2.10 The quality of the material will be such so as to ensure uninterrupted operation of the ticket issuing device, and allow good quality print, using both thermal and impact type printers, but predominantly for thermal printing.
- 2.11 The printing on the ticket material must last for at least 5 weeks and should not fade.

### 3 *Quality Control*

Quality of ticket material is very important. The successful tenderer will be responsible for the quality of ticket material at all times.

### 4 *Printing Surface*

- 4.1 The entire face of the ticket is defined as the "printing surface" and will conform to the following requirements:

- 4.2 Resolution

The quality of the printing surface will provide adequate resolution of printed characters and graphics when using a thermal printing head with a line density of six dots per millimetre.

- 4.3 Absorbability

The printing surface will be sufficiently absorbent to ensure proper keying of the thermal transfer ink while remaining dimensionally stable within the specified humidity range.

The printed characters will not smear when wiped over by a felt pad one second after being printed by the machine, under service conditions.

- 4.4 Durability

It must not be possible to erase printed characters without damaging the surface of the ticket.

- 4.5 Security Background

A security background needs to be printed on the printing surface of ticket material. The purpose of the security background is to impede forging of tickets and to assist with the identification of forged material and tickets.

- 4.6 Quality of Security Background

Security background printing will not affect printing qualities of the ticket material. It will not affect the smoothness of the print face, nor affect the

ability of material to accept printing. Simultaneously, security background printing may not affect the ticket issuing machine in any way.

#### 4.7 Number of Security Background Colours

It is a requirement that security background colours be changed on a regular basis. Tenderers are to provide the option to provide security background in 6 different colours.

#### 4.8 Colours Used for Security Background

Tenderers are required to suggest colours to be utilised in printing the security background. It must be difficult to make acceptable photocopies or electronic scanning of security background printing. Amongst others, tenderers should investigate using neon or metallic inks. Only one colour will be used at a time.

#### 4.9 Description of Security Background Printing for Prasa Rail

Viewing a ticket from the printing face side of a ticket in the portrait orientation, background security printing will be printed at an angle of 45°, from the lower left-hand to upper right-hand side

Security background printing will consist of the word "PRASA RAIL" printed in the official Prasa Rail font. The word will be repeated and spaced such that orientation of words between lines does not coincide. Full details will be furnished to the successful tenderer.

#### 4.10 Printing the Prasa Rail Conditions of Sale on Reverse Side of Ticket

A statement referring to the general conditions of sale will be printed on the reverse side of a ticket.

##### 4.10.1 Orientation of Printing

For the purpose of describing printing on the reverse side of ticket material, a ticket will be viewed in the landscape orientation.

##### 4.10.2 Printing of Messages

Provision must be made to print short messages on the reverse side of tickets of which the following is an example:

##### 4.10.3 Conditions of Sale

The conditions of sale must be printed on the reverse side of the ticket. The following text is required:

*"Issued by the Passenger Rail Agency of South Africa subject to the conditions contained in its Metro Services Book which are obtainable on request".*

The notice will be printed such that:

- ◆ A minimum clearance of 2 mm is maintained between the notice and the edge of the ticket.
- ◆ Regardless of the registration of the edge of the ticket with regards to the beginning of a notice, at least one complete notice will be displayed on any ticket.

#### 4.10.4 Changes to Text

It is probable that Prasa Rail will require changes to the "conditions of sale" text from time to time. The changes will be negotiated with the successful tenderer. It is expected that when requests are reasonable, financial implications to Prasa Rail will be negligible.

#### 4.11 Advertising Space

The reverse side of a ticket will be used for advertising. An advert of 35mm X 25mm will be printed on the reverse side of the ticket which will be discussed with the successful tenderer who must be able to print colour adverts.

### 1. *Regional Name and Numbering of Prasa Rail Ticket Material*

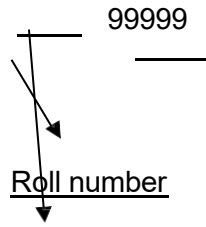
Viewing a ticket from the printing face side of a ticket in the portrait orientation with the outer end pointing upwards, the regional name and roll numbering shall be printed at an angle of 90 °, on the right hand side of the ticket.

The printing of the regional name and roll numbers shall consist of alpha and numeric digits at a font size of 7 or 8 (letter size). Regardless of the registration of cutting position with regards to the beginning of a regional name and roll number, at least one complete regional name and roll number shall be displayed on any ticket. Full details will be furnished to the successful tenderer.

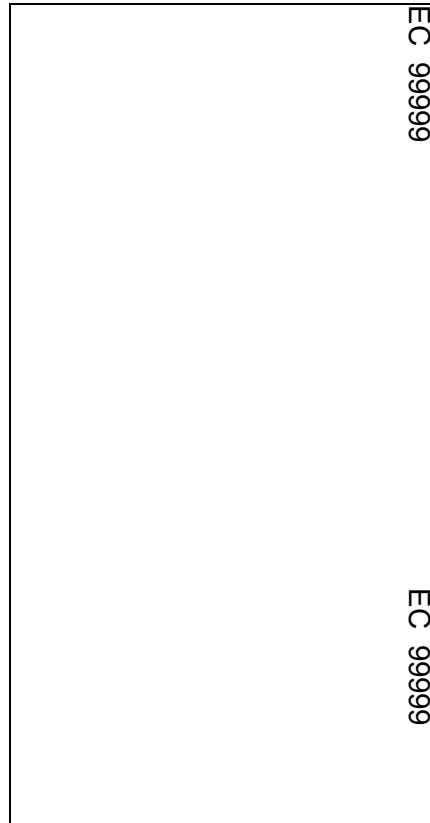
#### **Example of Ticket Numbering**

Breakdown of name and number to be used on ticket material with unique numbering for each roll.

EC



Regional name



2. *Additional Security Features on Ticket Material*

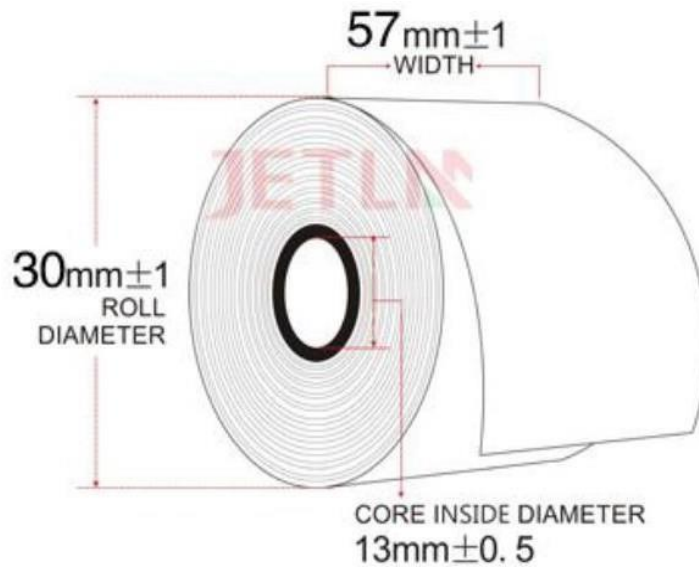
Tenders are requested to comment and quote separately on the following additional features per ITix rolls:

- Fixed offset metallic inks;
- Coin reactive inks;
- Fixed Offset Fluorescent inks; and
- Copy protection via Oyster Covert ink.

Tenderers are invited to recommend any alternative security features with the relevant cost per roll.

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2. **POS THERMAL PAPER ROLL**



The material shall be supplied in continuous rolls, without joints, splices or breaks, and wound onto a central circular core.

- ❖ Inner Diameter : ± 0.5 mm
- ❖ External Diameter : ± 0.5 mm
- ❖ Width : 57 mm + 0.1 mm; -0

- 4.1) The core of the Roll shall preferably be made of a synthetic material suitable for the purpose and shall not be deformed or collapse under the normal conditions of transport or storage.
- 4.2) The material shall be wound evenly on the core and with sufficient tension, as to prevent telescoping with normal handling.
- 4.3) The ticket material shall be wound to the inner core in the following direction:

The roll resting on a horizontal surface and viewed from the top. The tape shall be wound in a clockwise direction with the printing face facing outward or thermal coating on the outside of the roll. The security printing shall be orientated such that us read from the outer end of the material, when the outer end of the roll is held upwards.

- 4.4) The external diameter of a fully wound PITix roll shall be 30 mm ± 1 mm. Tenders are to state the length of material contained on a roll.
- 4.5) The width of the ticket shall be 57 mm ± 1 mm. the width to be measured by an optical method.

- 4.6) The colour is to be white unless otherwise specified.
- 4.7) Tenderers shall submit sufficient samples of the material offered to produce a minimum of 200 test tickets for evaluation purposes; this shall be provided free of charge. This is to test to verify if the material is compatible to our printers.
- 4.8) Conditions of Sale

The conditions of sale must be printed on the reverse side of the ticket. The following text is required:

"This ticket is issued by the Passenger Rail Agency of South Africa subject to the Conditions of Carriage and is not transferable.

Please report any fraudulent activity to the PRASA Fraud Hotline at toll free number 0800212679 or landline +27 43 700 2626."

The notice will be printed such that a minimum clearance of 2 mm is maintained between the notice and the edge of the ticket.

4.9) **Thermal Material for PITix Rolls**

The ticket material supplied by Tenderer for use in the Portable Ticketing Device (PITix) on EC Prasa Rail Region must comply (firm requirement) to the following specifications:

- Material : durable Thermal paper roll
- Thickness : 100mic Standard as per Tappi T- 4111
- Thermal Coating : shall meet or exceed ANSI 3.11 specification.
- Smoothness : Max. 75 Sheffield units
- Top Coating : the thermo- sensitive surface of the ticket stock

must be top coated.

- Pre- print : tickets can be pre- printed on one or both sides.
- Ink for Thermo- sensitive side: Laser printer approved ink without

Whiteners.

- Ink for Rear side : off ink

❖ Tenderers to state the meterage on each roll.

4.10) Ticket Roll Numbers :

Viewing a ticket from the printing face side of a ticket in the portrait orientation with the outer end pointing upwards, the regional name and roll numbering shall be printed at an angle of 90 °, on the right-hand side of the ticket.

4.11) Security Features: BLUE, Fluorescent Ink with Prasa Rail Logo

Viewing a ticket from the printing face side of a ticket in the portrait orientation, background security printing will be printed at an angle of 45°, from the lower left-hand to upper right-hand side

Security background printing will consist of the word “PRASA RAIL” printed in the official PRASA font. The word will be repeated and spaced such that orientation of words between lines does not coincide.

**4.12) The ticket material should have at the end of the Roll a Redline printed when there is only 60mm of the paper is still left in the device to warn the operator to change his/her roll.**

**5. PACKING, LABELLING AND SHIPPING OF MATERIAL**

1. The successful tenderer will be entirely responsible to PRASA Rail for all the material until it is accepted by Prasa Rail, and an acceptance certificate is issued.

- 1.1 Material in Rolls

- 1.1.1 The ITix rolls will be packed upright, with rolls laid flat and each roll individually shrink wrapped in moisture proof wrapping in quantities of three, in suitable corrugated cardboard containers.

- 1.1.2 The smaller rolls for the PTix's will be packed in corrugated cardboard containers in quantities prescribed in the annexure hereto. The individual rolls will be shrink- wrapped in moisture proof wrapping.

- 1.1.3 All ticket material will be packed so as to prevent damage in transit or storage.

- 1.2 Each cardboard carton will be permanently marked on at least two opposite sides with the following information:

- (i) Contents

- (ii) Material type and colour

- (iii) Batch number

- (iv) Order number

- (v) “For ITix” or “For PTix”

