

Annexure-C**INDIAN RAILWAYS****FUNCTIONAL REQUIREMENTS OF SPECIFICATION FOR
“TAKE AWAY FACE TOWEL” USED IN INDIAN RAILWAY AC
COACHES**

Issued By:
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FUNCTIONAL REQUIREMENTS OF SPECIFICATION FOR “TAKE AWAY FACE TOWEL” USED IN INDIAN RAILWAY AC COACHES

1. FOREWORD

Indian Railway is intends to develop specification for “TAKE AWAY” face towels supplied with linen set in AC coaches.

1.0 FUNCTIONAL REQUIREMENTS:

A) The “TAKE AWAY FACE TOWEL” should have following functional requirements:

1. It should be usable for a journey time of at least 3 days or longer without wash/replacement so that a passenger can take away the towel on completion of train journey without returning to Railways.
2. It should be much cheaper in price than presently used conventional fabric towel.
3. It should be preferably bio-degradable.
4. Fire retardant properties as per Para 2.0 or otherwise
5. There should not be any chemical coating over the surface to achieve flame retardancy.
6. It should be free from tackiness.
7. It should be odourless, wrinkle free, antibacterial, anti- allergic and skin friendly.
8. It should be lightweight and comfortable to general passengers.
9. It should have good absorbency and softness.

1.1 Coach Inside Condition:

Temperature and humidity of AC Coaches is as suitable for general living condition in Air-condition environment.

2.0 Fire Properties required for “TAKE AWAY FACE TOWEL”

| S. No | Properties | Required value | Test Method |
|-------|--|----------------|--------------------------------|
| 1 | Resistance to spread of flame | Class-A(Min.) | Appendix-5 of UIC-564-2 |
| 2 | Deterioration of visibility due to smoke | Class-A(Min.) | Appendix-15 of UIC-564-2 |
| 3 | Limiting Oxygen Index – Minimum | 35 | IS:13501 |
| 4 | Toxicity | Less than 1 | NCD-1409 |
| 5 | Heat Release Rate (MARHE i.e. Maximum Average Rate of Heat Emission in KW/m ²) as specified in EN 45545-2:2013 | R1(HL-3) | ISO-5660-1:50KW/m ² |

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3.0 Since the item is intended for public use, the specification proposed by firm`s shall be as generic as possible, so that source of raw material are easily available. In case a firm proposes a proprietary item with fire retardant properties, a valid tie up in the form of written MOU with source will be required.

4.0 If any other parameter needs to be evaluated may also be mentioned. Also the cost implication of the material may be submitted.

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