

**RESEARCH DESIGN & STANDARD ORGANISATION  
MANAK NAGAR, LUCKNOW-226011**

**Specification for Anti- Slip Flooring Mat**

(Spec. No- MP.0.42 .00.03, September 2003)

1. **Scope:** Anti-slip flooring is used to avoid slipping while working and should have wear characteristics. This composite is designed for flooring area that requires high vibration transmission loss, good heat-insulator, high abrasion resistance, chemical resistance, electric resistance & slip-free with cushioning effects at  $-40$  to  $110^{\circ}$  C
2. **Description:** Anti-slip flooring consists of three layers, A-Top layer, B-Middle layer and C-Bottom layer.



A Twisted Grain Wear Surface



B Barrier Layer



C Closed Cell Foam

- 2.1 **Twisted grain wear surface:** Typical values of various properties are given below.

**Description**

**Characteristics**

Type	Poly vinyl / Vinyl
Pattern	Deep twist grain
Thickness	Minimum 1.17 mm
Color	Black / Grey
Applied weight	827 Gram / Sq mtr.
Chemical resistance	With Water / Diesel-Oil / Hydrochloric Acid
Thermal conductivity	0.0346 Kcal / mt. hour. $^{\circ}$ C
Operating temp.	$-40$ to $110^{\circ}$ C

The value of Dynamic / Static coefficient of friction with rubber / Poly-vinyl in dry / wet / oil medium, shall be given by manufacturer.

- 2.1.1 **Tests:** Tests shall be conducted by manufacturer as per the methods indicated for various properties and shall conform to the following requirements.

S. No.	Property	Value	Method Of Test
1.	Tensile strength	50 psi	As per ASTM-D 412
2.	Elongation	120% to 150%	As per ASTM-D 412
3.	Flammability	Class A	ASTM E 648- 95A
4.	Smoke- density	170	Non flaming (ASTM E 622- 94A)
5.	Flexibility	Shall not break, crack or show any other sign of failure	Appendix- A IS: 3462 – 86

6.	Moisture movement % change in linear dimension	0.4	Appendix –B IS: 3462 -86
7.	Dimension stability	Change in any linear dimension shall not exceed 0.4%. After the specimen shall not show any signs of curling	Clause 5 of IS: 3464 - 86

**2.2 Barrier:** Typical values of various properties are given below.

**Description**

**Characteristic**

Type	Vinyl
Thickness	Minimum 3mm.
Flexibility	Highly flexible
Specific gravity	2 ± 10%
Sound reduction factor	3db / 2 mm
Oil absorption	Less than 0.05 %

**2.2.1 Tests:** Tests shall be conducted by manufacturer as per the methods indicated for various properties and shall conform to the following requirements.

S. No.	Property	Value	Method Of Test
1.	Tensile strength at 1% elongation	Along the machine direction 10 kg, perpendicular direction 10 kg	Annexure IV of RDSO specification no.C- 8515 REV-2
2.	Flexibility	Shall not break, crack or show any other sign of failure	Appendix A of IS: 3462-86
3.	Moisture movement (%) change in linear dimension	0.4	Appendix B of IS: 3462-86
4.	Resistance to spread of flame	To pass the test	Annexure-III of RDSO spec. C- 8515, REV 2
5.	Elongation at break (%)	100	IS 3462- 86
6.	Dimension stability	Change in any linear dimension shall not exceed 0.4%. After the specimen shall not show any signs of curling	Clause 5 of IS: 3464 - 86
7.	Residual indentation (mm) max	0.10	Clause 10 of IS : 3464 -86

### 2.3 Closed Cell Foam

Base polymer- EPDM / NBR / PVC

Base materials shall be with low water / oil absorption, excellent thermal insulation, excellent resilience, good impact sound deadening properties & good weathering resistance property. The manufacturer shall give the typical values.

**3. Acceptance Test:** The supplier shall conduct the following tests and records of all the tests done by the firm shall be maintained.

1. Visual observation
2. Dimensional check
3. Tensile test at 1 % elongation
4. Resistance to spread of flame
5. Elongation at break
6. Dimensional stability

**4. Marking:**

The following details shall be marked legibly on top-layer of each roll / sheet:

1. Manufacturer's initial / Trade mark
2. Batch no.
3. Year of manufacturing

**5. Packing:**

The material shall be suitably packed to avoid distortion, damage etc. during transit.