



CORPORATE PURCHASING SPECIFICATION

AA 514 23

Rev. No. 01

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EXPANDED POLYETHYLENE FOAM SHEET

1.0 GENERAL:

This specification governs the quality requirements of non-cross linked Expanded Polyethylene foam sheet of closed cell structure. The material is highly flexible, abrasion free, light weight, non-toxic, odourless & possess excellent cushioning property & resilience.

2.0 APPLICATION:

Used for packing and allied purposes.

3.0 COMPLIANCE WITH NATIONAL STANDARDS:

There is no Indian Standard covering this type of material.

4.0 DIMENSIONS AND TOLERANCES:

4.1 Sizes:

Thickness, Width & Length shall be as stated on our order.

4.2 Preferred thicknesses and tolerance:

4.2.1 Roll form:

1, 2, 3, 4, 5, 6, 8, 10 & 12mm with a tolerance of $\pm 10\%$.

4.2.2 Sheet form:

15, 20, 25, 30, 40, 50, 60, 70, 75, 80, 90 and 100mm with a tolerance of $\pm 10\%$.

4.3 Preferred Width and tolerance:

4.3.1 Roll form:

1200 and 1500 mm with a tolerance of $\pm 5\%$.

4.3.2 Sheet form:

1200 mm with a tolerance of $\pm 5\%$.

4.4 Preferred Length & Tolerance:

Revisions :
Cl. 9. 12 of MOM of WG of T&PM

APPROVED:
INTERPLANT MATERIAL RATIONALISATION
COMMITTEE- WG (T&PM)

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**4.4.5 Roll form:**

30, 60, 80 & 100 metres with a tolerance of +2%, -0%.

4.4.6 Sheet form:

2000 mm with a tolerance of +3%, -0%.

5.0 MANUFACTURE:

Foam sheets of thickness upto 12mm shall be manufactured by direct extrusion process. Higher thicknesses shall be produced by welding of laminated individual extrusion by a special process. The laminated layers shall not peel under heavy stresses & strain encountered during use. Material shall be resistant to most of the chemicals and shall be suitable for use from -40°C to +70°C.

6.0 APPEARANCE AND FINISH :

The material shall be uniform in colour and appearance and also free from undispersed raw material, streaks, foreign particles, tears and blisters. The edge shall be free of nicks and cuts to unaided eye.

7.0 COLOUR:

Unless otherwise specified, the film shall be supplied in Natural Colour (essentially colourless). Black colour or any other colour can also be ordered.

8.0 ODOUR:

The film shall be free from any objectionable odour.

9.0 TEST METHOD:

Unless otherwise specified, the material shall be tested as per Corporate Standard AA 085 17 01.

10.0 TEST SAMPLES:

Three sheets of ordered thickness & size 300 X 300mm shall be supplied for testing.

11.0 PROPERTIES:

11.1 Density: 0.026 - 0.045 g/c.c.

11.2 Tensile strength: 3.4 kg/cm² (min)

11.3 Elongation: 145% (min)



11.4 Compression strength
at 10% deflection: 0.2 kg/cm²(min)

11.5 Shrinkage at 60°C
for 24 hrs. : 0.15% (max)

11.6 Water absorption at
room temperature after
96 hrs immersion. : 0.4% (max) by volume.

12.0 INSPECTION AT SUPPLIERS' WORKS:

Whenever specified, tests and inspection are to be conducted in the presence of BHEL's representative.

BHEL's representative shall have free access at all times while the work on the contract is being performed, to all parts of the manufacturer's works. The manufacturer shall offer BHEL's representative all reasonable facilities without charge to satisfy the latter that the material is being furnished in accordance with this specification. The manufacturer shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities do not exist at his works, the manufacturer shall make necessary arrangements for carrying out the prescribed tests elsewhere. The manufacturer shall notify BHEL's representative in advance about the readiness of the material for inspection and testing.

BHEL reserves the right to test the material at BHEL's works and the final acceptance of the material shall be based on these test results.

13.0 TEST CERTIFICATES:

Three copies of test certificates shall be supplied unless otherwise stated on the order.

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their despatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

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BHEL Order No.

Batch/Lot No.

Results of dimensional inspection.

Test results of clause 11.

**14.0 PACKING AND MARKING:**

To be supplied in rolls suitably packed to prevent damage during transit and storage. Each roll shall be tightly wound on centre bobbin and wrapped with thick packing paper properly tied with cotton lace. Sheet shall be covered all around the water proof bituminised brown paper and packed in a wooden create to prevent damage transit.

Each roll/sheet shall be marked legibly with the following information:

AA 514 23

BHEL Order No.

Manufacturer's Name and Grade

Batch No. /Lot No. and date of manufacture

Thickness, Width and Length

New weight of the roll.

15.0 REJECTION AND REPLACEMENT:

In the event of any film proving defective during the course of preparation, testing, subsequent use, etc. such material shall be rejected notwithstanding any previous certification of satisfactory testing and/or inspection. The supplier shall under take to replace the rejected film at his own cost and the rejected material shall be taken by the supplier after fulfilling the commercial terms and conditions

16.0 REFERRED STANDARDS :

The following is the list of the latest standards, as published by the respective issuing bodies, referred to in this specification.

1. BHEL CS 085 17 01