



CORPORATE PURCHASING SPECIFICATION

AA 590 01

Rev. No. 01

PREFACE SHEET

SHEET RUBBER JOINTING - Gr: I, TYPE : A

**FOR INTERNAL USE ONLY
REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS**

Comparable Standards:

1. INDIAN : IS: 638 - 1979
Gr: I, TYPE : A.

Suggested/Probable Suppliers and Grades:

Refer plant vendors list.

User Plant References:

1. BHOPAL : IS: 638, Gr: I, TYPE A.
2. HEERWAR, HARDWAR : IS: 638, Gr: I, TYPE A.
3. HYDERABAD : IS: 638, Gr: I, TYPE A.

Revisions :

CI 3211.82 of MOM of MRC-CPO

APPROVED :

**INTERPLANT MATERIAL
RATIONALISATION COMMITTEE-MRC (CPO)**

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BHOPAL

Corp. R&D

JANUARY, 1990

**SHEET RUBBER JOINTING - Gr: I, TYPE :A****1.0 GENERAL :**

This specification governs the quality requirements of Sheet Rubber Jointing having a hardness of 50 to 65 IRHD.

2.0 APPLICATION:

Used as gaskets between flanges and similar joints subjected to low steam pressure upto 350 kN/m².

3.0 COMPLIANCES WITH NATIONAL STANDARDS:

The material shall comply with the requirements of the following national standards and also meet the requirements of this specification.

IS: 638 - 1979 : Sheet Rubber Jointing and Rubber Insertion Jointing.

Gr: I, Type : A

4.0 DIMENSIONS AND TOLERANCES:**4.1 Sizes:**

Length x Width x Thickness of the sheet shall be stated in BHEL order .

Gaskets and mouldings shall be supplied as per BHEL drawings.

Preferred thicknesses are:

2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 16 mm.

4.2 Tolerances:

Unless otherwise stated in the order / drawings, tolerances on length, width and thickness shall be as follows:

4.2.1 On Length And Width

± 3 mm.

4.2.2 On Thickness :

Upto and including 8 mm thick : ± 10%

Above 8 mm thick : ± 7.5%

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| <p>5.0 FINISH : Material shall have smooth finish.</p> <p>6.0 FREEDOM FROM DEFECTS: All ingredients of the mix shall be free from grit and extraneous matter. The selection and processing of the ingredients shall be such that the vulcanizate is free from surface, imperfections, blisters, porosity, voids, inclusions flow marks, inadequate joint of moulding blank and other defects which would impair the satisfactory performance. The material shall not develop excessive bloom on storage under normal temperature conditions.</p> <p>7.0 CHEMICAL COMPOSITION: Sheets shall be made out of vulcanizates based on natural or synthetic rubber or a blend thereof reinforced only with carbon black, vulcanized with sulphur/organic accelerator, activated with stearic acid and rubber containing at least 4 parts per hundred of zinc oxide and 2 parts per hundred of a suitable antioxidant. No factive or other extender, reclaimed or ground vulcanised rubber shall be used.</p> <p>8.0 TEST SAMPLES: Four samples of sheet, two of size 150 x 150 x 2.0 mm thickness, one of size 150 x 150 x 6.0 mm thickness and one of size 150 x 150 x 10 mm prepared from same batch and vulcanized to the same degree as the consignment concerned shall be supplied for testing.</p> <p>9.0 PROPERTIES: When tested in accordance with the Indian Standards shown against each, the test samples shall show the following properties.</p> <p>9.1 HARDNESS (IS: 3400, PART II): 50 to 65 IRHD. Test shall be done on 10 mm thick test sheet.</p> <p>9.2 Tensile Strength (IS : 3400, Part I, Dumb - bell): 12 N/mm², minimum.</p> <p>9.3 Elongation At Break (IS: 3400, Part I, Dumb - bell) 450 percent, minimum.</p> <p>9.4 Compression Set (IS:3400, part X): Compression set at 100⁰ C for 72 hours on samples dia 29.0 ± 0.5 and thickness 12.5±0.5mm shall be 35 percent, maximum.</p> | | |

**9.5 Accelerated Ageing For 72 Hours At 100⁰ C :****9.5.1 Change In Tensile Strength (IS: 3400, Part I, Dumb - bell):**

+ 10% , - 25%, max. of the value at clause 9.2.

9.5.2 Change In Elongation At Break (IS: 3400 Part I, Dumb - bell):

+ 10%, -35%, max. of the value at clause 9.3.

9.6 Resistance To Bending (IS: 638, Cl. 3.7):

There shall be no visible signs of cracking of the surfaces.

10.0 TEST CERTIFICATES:

Unless otherwise stated, three copies of test certificates shall be supplied giving the following information:

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

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BHEL Order No.

Drawing No. & Item No. if any :

Manufacturer's /Supplier's name and trade mark, if any

Test results of Clauses 4.0 and 9.0.

11.0 KEPING PROPERTY:

When stored under cover in a dry place under normal storage conditions, the material shall retain the properties prescribed in this specification for a period of not less than 24 months after the date of manufacture, which shall be subsequent to the date of placing the order.

12.0 PACKING AND MARKING:

Material shall be suitably packed to prevent damage from contamination and handling during transit. Each package shall be legibly marked with the following information:

AA 590 01 : Sheet Rubber Jointing - Gr: I, Type: A.

BHEL Order No.

Manufacturer's / Supplier's Name.

Trade Mark, if any.

Batch No.

Size and Quantity.

13.0 REFERRED STANDARDS (Latest Publications Including Amendments):

1) IS:638

2) IS:3400