

BHARAT HEAVY ELECTRICALS LIMITED BHOPAL

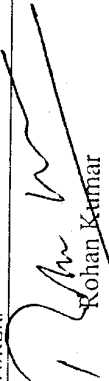
QUALITY PLAN FOR NITRILE RUBBER SHEETS, GASKETS AND MOULDINGS (SPEC AA59807)

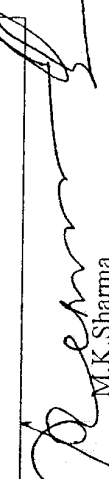
QA PLAN NO: QA/TCB/BO/21 REV.02 DATE: 09/03/2017 PAGE 1 OF 1


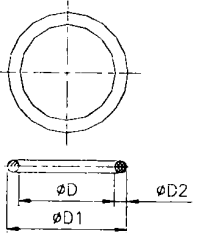
| SL | STAGE | CHARACTERISTICS | TYPE OF CHECK | QUANTUM OF CHECK | REFERENCE DOCUMENT | FORMAT OF RECORD | AGENCY | REMARKS |
|----|------------------|---|---------------|-------------------------------|--------------------|------------------|-----------------------|--|
| 1 | Final Inspection | 1.1 Dimensions | M | 3 Samples per P.O. Items. | AA59807 | TR | Supplier and CQS/TPIA | CHP |
| | | 1.2 Finish & freedom from defects. | V | 20% | AA59807 | TR | | CHP - There shall be no surface imperfections, blisters, porosity, voids, and inclusions. |
| | | 1.3 Identification (Material shall be of butadiene acrylonitrile copolymer) | V | 20% | AA59807 | TR | Supplier and CQS/TPIA | Record review |
| 2 | Final Testing | 2.1 Check of Hardness, Tensile strength, Elongation on slab and hutton level | T | 1 Sample test Piece* per P.O. | AA59807 | TC | Supplier and CQS/TPIA | CHP For witness |
| | | 2.2 Type Tests to check Volume change, Adhesion/Corrosion and accelerated aging | T | One Sample test Piece* | AA59807 | TC | Supplier and CQS/TPIA | Record review Type Test to be conducted at NABL accredited lab once in 3 years / Report of Type test conducted not more than 3 years ago to be reviewed and test date to be Reported. |
| 3 | Pre-Despatch | 3.1 Test samples for testing at BHEL works | V | 1 Sample test piece* | AA59807 | TR | Supplier and CQS/TPIA | One set of sample test Piece* per P.O. shall be dispatched to BHEL Bhopal |
| | | 3.2 Vendor Identification and Shelf Life | V | 100% | AA59807 | TR | Supplier and CQS/TPIA | Vendor Identification and expiry date shall be marked legibly on material itself at every 3 meters. |




* Vendor to ensure that the Test Sample represents the actual lot and evidence to be produced if required.

V - VISUAL, M-MEASUREMENT, T-TEST, TP/IA-THIRD PARTY INSPECTION AGENCY, CHP - CUSTOMER HOLD POINT (VENDOR CAN NOT PROCEED WITHOUT GETTING CLEARANCE FROM CQS/TP/IA, TC-TEST CERTIFICATE, TR-TEST CERTIFICATE/REPORT/QC RECORD/MFG, RECORD OF MANUFACTURER.


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| REF | COMP. dig |  Form No. 2038 | उत्पाद मानक परिणामित्र शाप/अभि. निर्देश | PRODUCT STANDARD TRANSFORMER SHOP/ENGG INSTRUCTIONS | TR200540 2 पृष्ठों में 1 PAGE 1 OF 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | TITLE: <u>"O" RING NITRILE RUBBER MOULDING</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COPYRIGHT AND CONFIDENTIAL The Information on this document is the property of BIHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the Company. | |  | | <table border="1"> <thead> <tr> <th>REMARKS</th> <th colspan="7">MATERIAL- RUBBER (AA59807)</th> </tr> <tr> <th>FLANGE REF.</th> <th>STYLE NO.</th> <th>ITEM NO.</th> <th>ØD</th> <th>TOL</th> <th>ØD1</th> <th>ØD2</th> <th>TOL</th> </tr> </thead> <tbody> <tr><td></td><td></td><td>001</td><td>9.3</td><td>±0.1</td><td>14.1</td><td rowspan="3">2.4</td><td rowspan="3">±0.08</td></tr> <tr><td></td><td></td><td>002</td><td>11.3</td><td>±0.15</td><td>16.1</td></tr> <tr><td></td><td></td><td>003</td><td>15.3</td><td></td><td>20.1</td></tr> <tr><td></td><td></td><td>004</td><td>19.2</td><td rowspan="3">±0.2</td><td>25.2</td><td rowspan="3">3</td><td rowspan="3">±0.08</td></tr> <tr><td></td><td></td><td>005</td><td>24.2</td><td>30.2</td></tr> <tr><td></td><td></td><td>006</td><td>26.2</td><td>32.2</td></tr> <tr><td></td><td></td><td>007</td><td>29.2</td><td></td><td>35.2</td><td rowspan="3">3</td><td rowspan="3">±0.05</td></tr> <tr><td></td><td></td><td>008</td><td>34.2</td><td></td><td>40.2</td></tr> <tr><td></td><td></td><td>009</td><td>39.2</td><td>±0.3</td><td>45.2</td></tr> <tr><td></td><td></td><td>010</td><td>44.2</td><td></td><td>50.2</td><td rowspan="3">5.7</td><td rowspan="3">±0.1</td></tr> <tr><td>44795300022</td><td>25NB</td><td>BP9096047990</td><td>011</td><td>44.2</td><td>55.6</td></tr> <tr><td>34991900087</td><td>FOR DRAIN</td><td>BP9096057376</td><td>012</td><td>54.2</td><td>65.6</td></tr> <tr><td></td><td></td><td></td><td>013</td><td>64.2</td><td>75.6</td><td rowspan="3">8.4</td><td rowspan="3">±0.15</td></tr> <tr><td>34644300157 (IT. 003)</td><td>50NB</td><td>BP9096048008</td><td>014</td><td>74.2</td><td>85.6</td></tr> <tr><td></td><td></td><td></td><td>015</td><td>79.2</td><td>90.6</td></tr> <tr><td></td><td></td><td></td><td>016</td><td>84.1</td><td>95.5</td><td rowspan="3">±0.4</td><td rowspan="3"></td></tr> <tr><td></td><td></td><td></td><td>017</td><td>89.1</td><td>100.5</td></tr> <tr><td></td><td></td><td></td><td>018</td><td>99.1</td><td>110.5</td></tr> <tr><td>44795300016</td><td>80NB</td><td>BP9096048016</td><td>019</td><td>104.1</td><td>115.5</td><td rowspan="3"></td><td rowspan="3"></td></tr> <tr><td></td><td></td><td></td><td>020</td><td>119.3</td><td>130.7</td></tr> <tr><td>34993000012 (IT.001)</td><td></td><td>BP9096051432</td><td>021</td><td>124.3</td><td>135.7</td></tr> <tr><td></td><td></td><td></td><td>022</td><td>129.3</td><td>140.7</td><td rowspan="3"></td><td rowspan="3"></td></tr> <tr><td>44795300052</td><td>100NB</td><td>BP9096048024</td><td>023</td><td>134.3</td><td>145.7</td></tr> <tr><td></td><td></td><td></td><td>024</td><td>144.3</td><td>155.7</td></tr> <tr><td></td><td></td><td></td><td>025</td><td>164.1</td><td>180.9</td><td rowspan="3">±0.6</td><td rowspan="3"></td></tr> <tr><td></td><td></td><td></td><td>026</td><td>209.1</td><td>225.5</td></tr> <tr><td>44795300036</td><td>200NB</td><td>BP9096048032</td><td>027</td><td>239.1</td><td>255.9</td></tr> <tr><td></td><td></td><td></td><td>028</td><td>249.1</td><td>265.9</td><td>±0.8</td><td></td></tr> </tbody> </table> | | | | REMARKS | MATERIAL- RUBBER (AA59807) | | | | | | | FLANGE REF. | STYLE NO. | ITEM NO. | ØD | TOL | ØD1 | ØD2 | TOL | | | 001 | 9.3 | ±0.1 | 14.1 | 2.4 | ±0.08 | | | 002 | 11.3 | ±0.15 | 16.1 | | | 003 | 15.3 | | 20.1 | | | 004 | 19.2 | ±0.2 | 25.2 | 3 | ±0.08 | | | 005 | 24.2 | 30.2 | | | 006 | 26.2 | 32.2 | | | 007 | 29.2 | | 35.2 | 3 | ±0.05 | | | 008 | 34.2 | | 40.2 | | | 009 | 39.2 | ±0.3 | 45.2 | | | 010 | 44.2 | | 50.2 | 5.7 | ±0.1 | 44795300022 | 25NB | BP9096047990 | 011 | 44.2 | 55.6 | 34991900087 | FOR DRAIN | BP9096057376 | 012 | 54.2 | 65.6 | | | | 013 | 64.2 | 75.6 | 8.4 | ±0.15 | 34644300157 (IT. 003) | 50NB | BP9096048008 | 014 | 74.2 | 85.6 | | | | 015 | 79.2 | 90.6 | | | | 016 | 84.1 | 95.5 | ±0.4 | | | | | 017 | 89.1 | 100.5 | | | | 018 | 99.1 | 110.5 | 44795300016 | 80NB | BP9096048016 | 019 | 104.1 | 115.5 | | | | | | 020 | 119.3 | 130.7 | 34993000012 (IT.001) | | BP9096051432 | 021 | 124.3 | 135.7 | | | | 022 | 129.3 | 140.7 | | | 44795300052 | 100NB | BP9096048024 | 023 | 134.3 | 145.7 | | | | 024 | 144.3 | 155.7 | | | | 025 | 164.1 | 180.9 | ±0.6 | | | | | 026 | 209.1 | 225.5 | 44795300036 | 200NB | BP9096048032 | 027 | 239.1 | 255.9 | | | | 028 | 249.1 | 265.9 | ±0.8 | |
| | | | | REMARKS | MATERIAL- RUBBER (AA59807) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FLANGE REF. | STYLE NO. | ITEM NO. | ØD | TOL | ØD1 | ØD2 | TOL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 001 | 9.3 | ±0.1 | 14.1 | 2.4 | ±0.08 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 002 | 11.3 | ±0.15 | 16.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 003 | 15.3 | | 20.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 004 | 19.2 | ±0.2 | 25.2 | 3 | ±0.08 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 005 | 24.2 | | 30.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 006 | 26.2 | | 32.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 007 | 29.2 | | 35.2 | 3 | ±0.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 008 | 34.2 | | 40.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 009 | 39.2 | ±0.3 | 45.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 010 | 44.2 | | 50.2 | 5.7 | ±0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44795300022 | 25NB | BP9096047990 | 011 | 44.2 | 55.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34991900087 | FOR DRAIN | BP9096057376 | 012 | 54.2 | 65.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 013 | 64.2 | 75.6 | 8.4 | ±0.15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34644300157 (IT. 003) | 50NB | BP9096048008 | 014 | 74.2 | 85.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 015 | 79.2 | 90.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 016 | 84.1 | 95.5 | ±0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 017 | 89.1 | 100.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 018 | 99.1 | 110.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44795300016 | 80NB | BP9096048016 | 019 | 104.1 | 115.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 020 | 119.3 | 130.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34993000012 (IT.001) | | BP9096051432 | 021 | 124.3 | 135.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 022 | 129.3 | 140.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44795300052 | 100NB | BP9096048024 | 023 | 134.3 | 145.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 024 | 144.3 | 155.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 025 | 164.1 | 180.9 | ±0.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 026 | 209.1 | 225.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44795300036 | 200NB | BP9096048032 | 027 | 239.1 | 255.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 028 | 249.1 | 265.9 | ±0.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TR200540 PAGE 1 OF 2 | पुन:Rev. 08 दि. Dt. 06.06.20 NM AKD | | IT NO. 059 ADDED. वितरण DISTRIBUTION. TRE/TRM/FTM TRX/TTG/ QC-TCB/QA-TCB/ JHANSI | सं. स्वीकृत किया : APPROVED :sd/- SRR, MPS तैयार किया PREPD. जारी किया ISSUED sd/-A.K.SINHARROY दोआदई/मानक TRE/STD. दिनांक DATE 18.03.87 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| REF | COMP. drg |  Form No. 2038 | उत्पाद मानक परिणामित्र शाप/अभि. निर्देश | PRODUCT STANDARD TRANSFORMER SHOP/ENGG INSTRUCTIONS | TR200540 2 पृष्ठों में 2 PAGE 2 OF 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|---|--|-------|------------|---------|-----------------------------------|--|--|--|--|--|--|-------------|-----------|----------|----|-----|-----|-----|-----|--|--|-----|------|----|------|---|------|--|--|-----|------|--|------|--|--|--|--|-----|------|--|------|--|--|-------------|---|--------------|-----|-------|------|-------|-----------|--|--|--------------|-----|-------|--|-------|--|--|--|--|-----|-------|--|-------|--|--|--|--|-----|-------|--|-------|--|---------------------------|--------|--------------|-----|-------|--|-------|--|--|--|--|-----|-------|------|-------|-----------|--|--|--|-----|-------|--|-------|--|-------------|---|--------------|-----|-------|--|-------|--|--|--|--|-----|-------|----|-------|----------|--|--|--|-----|-------|--|-------|--|-------------|---|--------------|-----|------|------|-------|------------|----------------------|--|--|-----|-------|------|-------|---------|----------------------|--|--|-----|-------|--|-------|---|----------------------|--|--|-----|-------|--|-------|---|----------------------|-------|--------------|-----|------|--|------|----------|----------------------|-------|--------------|-----|-------|
| | | | <table border="1"> <thead> <tr> <th>REMARKS</th> <th colspan="7">MATERIAL-NITRILE RUBBER (AA59807)</th> </tr> <tr> <th>FLANGE REF.</th> <th>STYLE NO.</th> <th>ITEM NO.</th> <th>ØD</th> <th>TOL</th> <th>ØD1</th> <th>ØD2</th> <th>TOL</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>041</td> <td>49.5</td> <td>±4</td> <td>55.5</td> <td>3</td> <td>±0.1</td> </tr> <tr> <td></td> <td></td> <td>042</td> <td>59.5</td> <td></td> <td>65.5</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>043</td> <td>69.5</td> <td></td> <td>75.5</td> <td></td> <td></td> </tr> <tr> <td>44691600020</td> <td>#</td> <td>BP9096051491</td> <td>044</td> <td>149.3</td> <td>±0.6</td> <td>160.7</td> <td>5.7 ±0.15</td> </tr> <tr> <td></td> <td></td> <td>BP9096047770</td> <td>045</td> <td>159.3</td> <td></td> <td>170.7</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>046</td> <td>164.3</td> <td></td> <td>175.7</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>047</td> <td>179.3</td> <td></td> <td>190.7</td> <td></td> </tr> <tr> <td>34644300157 (IT. NO. 006)</td> <td>150NB.</td> <td>BP9096058895</td> <td>048</td> <td>184.3</td> <td></td> <td>195.7</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>049</td> <td>199.3</td> <td>±0.8</td> <td>210.7</td> <td>5.7 ±0.15</td> </tr> <tr> <td></td> <td></td> <td></td> <td>050</td> <td>209.3</td> <td></td> <td>220.7</td> <td></td> </tr> <tr> <td>44692100006</td> <td>S</td> <td>BP9096047761</td> <td>051</td> <td>239.3</td> <td></td> <td>250.7</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>052</td> <td>259.3</td> <td>±1</td> <td>270.7</td> <td>5.7 ±0.2</td> </tr> <tr> <td></td> <td></td> <td></td> <td>053</td> <td>269.3</td> <td></td> <td>280.7</td> <td></td> </tr> <tr> <td>34781000019</td> <td>*</td> <td>BP9096048245</td> <td>054</td> <td>56.5</td> <td>±0.4</td> <td>67.19</td> <td>5.33 ±0.15</td> </tr> <tr> <td>24992100011 (IT.001)</td> <td></td> <td></td> <td>055</td> <td>607.5</td> <td>±0.4</td> <td>623.5</td> <td>8 ±0.25</td> </tr> <tr> <td>24992100011 (IT.002)</td> <td></td> <td></td> <td>056</td> <td>351.5</td> <td></td> <td>367.5</td> <td>8</td> </tr> <tr> <td>24992100011 (IT.003)</td> <td></td> <td></td> <td>057</td> <td>245.5</td> <td></td> <td>261.5</td> <td>8</td> </tr> <tr> <td>34644300157 (IT. 01)</td> <td>15 NB</td> <td>BP9096058909</td> <td>058</td> <td>30.1</td> <td></td> <td>41.5</td> <td>5.7 ±0.1</td> </tr> <tr> <td>34644300157 (IT. 08)</td> <td>250NB</td> <td>BP9096060202</td> <td>059</td> <td>295.1</td> <td>±0.8</td> <td>311.5</td> <td>8 ±0.15</td> </tr> </tbody> </table> | | | | | REMARKS | MATERIAL-NITRILE RUBBER (AA59807) | | | | | | | FLANGE REF. | STYLE NO. | ITEM NO. | ØD | TOL | ØD1 | ØD2 | TOL | | | 041 | 49.5 | ±4 | 55.5 | 3 | ±0.1 | | | 042 | 59.5 | | 65.5 | | | | | 043 | 69.5 | | 75.5 | | | 44691600020 | # | BP9096051491 | 044 | 149.3 | ±0.6 | 160.7 | 5.7 ±0.15 | | | BP9096047770 | 045 | 159.3 | | 170.7 | | | | | 046 | 164.3 | | 175.7 | | | | | 047 | 179.3 | | 190.7 | | 34644300157 (IT. NO. 006) | 150NB. | BP9096058895 | 048 | 184.3 | | 195.7 | | | | | 049 | 199.3 | ±0.8 | 210.7 | 5.7 ±0.15 | | | | 050 | 209.3 | | 220.7 | | 44692100006 | S | BP9096047761 | 051 | 239.3 | | 250.7 | | | | | 052 | 259.3 | ±1 | 270.7 | 5.7 ±0.2 | | | | 053 | 269.3 | | 280.7 | | 34781000019 | * | BP9096048245 | 054 | 56.5 | ±0.4 | 67.19 | 5.33 ±0.15 | 24992100011 (IT.001) | | | 055 | 607.5 | ±0.4 | 623.5 | 8 ±0.25 | 24992100011 (IT.002) | | | 056 | 351.5 | | 367.5 | 8 | 24992100011 (IT.003) | | | 057 | 245.5 | | 261.5 | 8 | 34644300157 (IT. 01) | 15 NB | BP9096058909 | 058 | 30.1 | | 41.5 | 5.7 ±0.1 | 34644300157 (IT. 08) | 250NB | BP9096060202 | 059 | 295.1 |
| REMARKS | MATERIAL-NITRILE RUBBER (AA59807) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FLANGE REF. | STYLE NO. | ITEM NO. | ØD | TOL | ØD1 | ØD2 | TOL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 041 | 49.5 | ±4 | 55.5 | 3 | ±0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 042 | 59.5 | | 65.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 043 | 69.5 | | 75.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44691600020 | # | BP9096051491 | 044 | 149.3 | ±0.6 | 160.7 | 5.7 ±0.15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | BP9096047770 | 045 | 159.3 | | 170.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 046 | 164.3 | | 175.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 047 | 179.3 | | 190.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34644300157 (IT. NO. 006) | 150NB. | BP9096058895 | 048 | 184.3 | | 195.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 049 | 199.3 | ±0.8 | 210.7 | 5.7 ±0.15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 050 | 209.3 | | 220.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44692100006 | S | BP9096047761 | 051 | 239.3 | | 250.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 052 | 259.3 | ±1 | 270.7 | 5.7 ±0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 053 | 269.3 | | 280.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34781000019 | * | BP9096048245 | 054 | 56.5 | ±0.4 | 67.19 | 5.33 ±0.15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24992100011 (IT.001) | | | 055 | 607.5 | ±0.4 | 623.5 | 8 ±0.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24992100011 (IT.002) | | | 056 | 351.5 | | 367.5 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24992100011 (IT.003) | | | 057 | 245.5 | | 261.5 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34644300157 (IT. 01) | 15 NB | BP9096058909 | 058 | 30.1 | | 41.5 | 5.7 ±0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34644300157 (IT. 08) | 250NB | BP9096060202 | 059 | 295.1 | ±0.8 | 311.5 | 8 ±0.15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p># FOR EARTHING TERMINAL ASSY. DRG.34991900016 FOR FIG. & 34991900017 FOR BOM \$ FOR 145 KV. O.I.P. CONDENSER BUSHING DRG. 05380101003, BCE - 3 - 1011. * FOR USE IN CAPACITOR VOLTAGE TRANSFORMER & CURRENT TRANSFORMER.</p> <p>NOTE: - DATE OF EXPIRY SHALL BE PRINTED ON EACH 'O' RING.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TR200540 PAGE 2 OF 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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CORPORATE PURCHASING SPECIFICATION

AA59807

Rev No. 04

PAGE 1 of 4

NITRILE RUBBER SHEETS, GASKETS AND MOULDINGS, 70 IRHD

1 GENERAL

This specification governs the quality requirements of Nitrile Rubber Sheets, Gaskets and Mouldings having a hardness of 70 IRHD.

2 APPLICATION

Used as gaskets and moulded components, cord in Water Turbines, Shunt Reactors, Transformers, etc.

3 COMPLIANCE WITH NATIONAL/INTER NATIONAL STANDARDS

The material shall comply, in general, with the requirements of the following Inter National Standard and also meet the requirements of this specification.

BS 2751 : 2001, Gr: BA70 : General Purpose Acrylonitrile Butadiene Rubber Compounds.

And also shall meet the additional requirement of clause 11 of this specification.

4 DIMENSIONS AND TOLERANCES

4.1 Sizes

Length x Width x Thickness of the sheet shall be stated in BHEL order. For cord, diameter and length shall be stated in order. Gaskets and moldings shall be supplied as per BHEL drawings. Preferred thickness for sheets and gaskets are 2, 3, 4, 5, 6, 7, 10, 11, 12 and 16 mm

4.2 Tolerances

Unless otherwise stated on the order/drawing, tolerance on length, width and thickness shall be as follows.

4.2.1 Length And Width

± 3 mm.

4.2.2 On Thickness

| Nominal thickness, mm | | Tolerance, ±mm |
|-----------------------|------------------|----------------|
| Over | upto & including | |
| -- | 2 | 0.25 |
| 2 | 8 | 0.4 |
| 8 | 12 | 0.6 |
| 12 | 16 | 0.8 |

Revisions:

As per clause 36.1.7.2 of MOM of MRC-CPO

APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(CPO+NM)

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HEP, Bhopal

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Rev No. 04

PAGE 2 of 4

CORPORATE PURCHASING SPECIFICATION**4.3 On diameter of cord**

| Diameter, mm | | Tolerance, \pm mm |
|--------------|------------------|---------------------|
| Over | upto & including | |
| -- | 3 | 0.1 |
| 3 | 6 | 0.2 |
| 6 | 12 | 0.25 |
| 12 | 25 | 0.4 |
| 25 | 40 | 0.6 |
| 40 | 60 | 0.8 |

5 FINISH

Material shall have a smooth finish.

6 FREEDOM FROM DEFECTS

All ingredients of the mix shall be free from grit & 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 satisfactory performance.

The material shall not develop excessive bloom on storage under normal temperature conditions.

7 CHEMICAL COMPOSITION

Sheets, gaskets and moulding shall be made out of vulcanizates based on Butadiene acrylonitrile copolymer reinforced only 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 factice or other extender, reclaimed or ground vulcanised rubber, shall be used.

8 IDENTIFICATION

The material when identified by infrared spectrophotometer or by any other convenient method shall be of butadiene acrylonitrile copolymer.

9 TEST SAMPLES

Three samples of sheets of the following sizes prepared from the same batch and vulcanized to the same degree as the consignment concerned shall be submitted for testing.

150 x 150 x 2 ± 0.15 mm thick : Two sheets

150 x 150 x 6.3 ± 0.15 mm thick : One sheet

10 PROPERTIES


When tested in accordance with the Indian Standards /British Standards shown against each, the test samples, shall show the following properties:

10.1 Hardness (BS 903 : Part A26: Method N, 2 Plies, 6.3 mm + 2 mm with the thicker Ply on Top)

70 $^{+5}_{-4}$ IRHD

10.2 Tensile Strength (IS 3400 : Part 1, Dumb-bell)

12.5 N/mm² minimum.

| | | |
|---|---|---------|
|  | <p align="center">CORPORATE PURCHASING SPECIFICATION</p> | AA59807 |
| Rev No. 04 | | |
| PAGE 3 of 4 | | |

10.3 Elongation at Break (IS 3400 : Part 1, Dumb-bell)
250% minimum.

10.4 Compression Set At 70°C (IS 3400 : Part X)
For 72 ⁺⁰₋₂ hours 20% max.

11 TYPE TESTS

Whenever specified, the following type tests shall be conducted as per the test method specified against each and the norms of acceptance shall be as specified below:

11.1 Volume Change (BS 903 : Part A16, Volumetric Method, Liquid B, 22 Hours at 40°C)
25% maximum

11.2 Adhesion to and corrosion of metals (BS 2751 : Appendix A)
There shall be no corrosion or pitting of the metals and the material shall not adhere to the metal surface or show any sign of liquid exudation. Discolouration of the metal surface shall not be considered to be objectionable.

11.3 Accelerated Ageing (IS 3400 : Part IV)

11.3.1 Ageing in Air
Four test specimens (where possible 25 mm wide of suitable length) shall be cut from each sheet in the sample from widely separated positions. The specimens shall be aged in air for 168 hours, at 100 ± 1°C.

11.3.2 Ageing in Oil
Two test specimens each of 25 mm wide and of suitable length shall be cut from each sheet in the sample from widely separated positions. The specimens shall be aged in insulating oil conforming to IS 335, for 168 hours at 100°C.

After the oil is wiped by blotting paper, the specimens shall show the following properties.

11.3.2.1 Oil Absorption (calculated on the Original Weight of the Specimen)
10% maximum

11.3.2.2 Change in Dimension
Thickness : 4% maximum.
Length and Width : 6% maximum.

12 TEST CERTIFICATES

Unless otherwise stated, three copies of 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 dispatch documents for quick clearance of the material:

AA59807, Rev.04: NITRILE RUBBER SHEETS, GASKETS AND MOULDINGS, 70 IRHD
BHEL Order No.
Manufacture's/Supplier's Name and Trade mark, if any.
Batch/Lot No.
Date of manufacture
Test results of clauses 4, 8, 10 and 11

AA59807

Rev No. 04

PAGE 4 of 4

CORPORATE PURCHASING SPECIFICATION**13 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.

14 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:

AA59807: NITRILE RUBBER SHEETS, GASKETS AND MOULDINGS, 70 IRHD

BHEL Order No. .

Supplier's/ Manufacturer's Name and Trade mark, if any

Batch No.

Drawing No. & Item No., if any

Size and Quantity supplied

15 REFERRED STANDARDS (Latest Publications Including Amendments)

- 1) IS 335
- 2) IS 3400 : Part 1
- 3) IS 3400 : Part IV
- 4) IS 3400 : Part X
- 5) BS 903