**FORMAT FOR SENDING COMMENTS ON BIS DOCUMENTS**

**DOC NO**. **CHD 17 (24765) WC/IS 2960**

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| **TITLE**: **BOOKBINDING LEATHER — SPECIFICATION (IS 2960)** |

**DATE OF CIRCULATION**:

**NAME OF THE COMMENTATOR/ORGANIZATION**: **CHANDRASEKAR R**/**CSIR-CLRI**

| **SL NO.** | **CLAUSE/SUB-CLAUSE/PARA/TABLE FIG. NO. COMMENTED** | **COMMENTATOR/**  **ORGANIZATION**  **ABREVIATION** | **COMMENTS** | **DECISIONS** |
| --- | --- | --- | --- | --- |
| **(1)** | **(2)** | **(3)** | **(4)** | **(5)** |
| 1 | 4.1 | CSIR-CLRI | **The clause is rephrased viz**.  *[The raw material shall be of good quality sheep, goat or calf skin or cow hide or Buff calf free from grain defects and insect damages]* |  |
| 2 | 4.2 | CSIR-CLRI | **The clause is rephrased viz**.  *[The hides and skins may be tanned with vegetable tanning materials, preferably the blend of pyrogallol groups or the combination of materials imparting comparable tanning efficiency, or chrome-tanned or chrome-vegetable combination tanned]* |  |
| 3 | 4.3 | CSIR-CLRI | **The clause is rephrased viz**.  *[The leather shall be of uniform thickness and finished with full grain. The leather shall be treated with suitable chemicals to prevent from rotting]* |  |
| 4 | 4.4 | CSIR-CLRI | **The clause is rephrased viz**.  *[The leather shall be given suitable anti-mildew treatment, to avoid microbial growth. The extent of treatment is as agreed between the purchaser and the supplier when examined visually.]* |  |
| 5 | 4.5, 4.5.1 & 4.6 | CSIR-CLRI | **Delete the clauses**  **4.5, 4.5.1 and 4.6** |  |
| 6 | 4.7 | CSIR-CLRI | **Renumber as 4.5 and appended under the Chemical requirements viz.**  **[***Quality of Reagents-Unless specified otherwise, pure chemicals (see Note) and distilled water see IS 1070 shall be employed in tests.*  *NOTE — ‘Pure chemical’ shall mean chemicals that do not contain impurities which affect the result of analysis***]** |  |
| 7 | 4.7/Table-1/S. No.(i)  Column 4 | CSIR-CLRI | Replace the test method with  IS 582 Part 14, under the clause 4.5 |  |
| 8 | 4.7/Table-1/S. No.(iv)  Column 3 | CSIR-CLRI | Replace the value viz.  **3.5** under the clause 4.5 |  |
| 9 | 4.7/Table-1/S. No.(vii)  Column 2 | CSIR-CLRI | Iron, mg/kg, *Max* under the clause 4.5 |  |
| 10 | 4.7/Table-1/S. No.(vii)  Column 3 | CSIR-CLRI | **100** under the clause 4.5 |  |
| 11 | 4.7/Table-1/S. No.(vii)  Column 4 | CSIR-CLRI | Delete ~~Part 6/Sec 2~~ and keep only Part 6/Sec 1 under the clause 4.5 |  |
| 12 | 4.7/Table-1/S. No.(viii)  Column 2 | CSIR-CLRI | Copper, mg/kg, *Max* under the clause 4.5 |  |
| 13 | 4.7/Table-1/S. No.(viii)  Column 3 | CSIR-CLRI | **100** under the clause 4.5 |  |
| 14 | 4.7/Table-1/S. No.(viii)  Column 4 | CSIR-CLRI | Delete ~~Part 6/Sec 2~~ and keep only Part 6/Sec 1 under the clause 4.5 |  |
| 15 | 4.7/Note | CSIR-CLRI | **The note is rephrased viz.**  [*The requirements shall be on a zero percent moisture basis except for S. No. (iv) and (vi). The moisture content shall be determined by LC:1 or Part 1 of IS 582]* |  |
| 16 | 4.8 | CSIR-CLRI | **Renumber as 4.6 and appended under the Physical requirements viz.**  **[***The test specimens shall be conditioned as prescribed in 7.6 to moisture equilibrium in an atmosphere of (65 ± 2) % relative humidity and temperature of (27 ± 2) °C and, if possible, tested in that atmosphere or soon after removal from that atmosphere***.** *The**Standard Atmospheric conditions for physical testing unless otherwise required by the particular method of test***]** |  |
| 17 | 4.8/Table-2 | CSIR-CLRI | **Revised Table is given below** |  |
| 18 | 4.8.1, 4.8.2 | CSIR-CLRI | **Delete the clauses**  **4.8.1, 4.8.2** |  |
| 19 | 7 | CSIR-CLRI | **Delete the clause 7** |  |

**Table 2- Physical requirement of Book Binding Leather**

(*Clause 4.6*)

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| **S. No** | **Properties** | **Requirement** | **Test Method** |
| 1 | Thickness, *mm* | 0.6-0.9 | IS 5914/LP 1 |
| 2 | **Tear strength**, kg, *Min* |  | IS 5914 Part 5/Sec 2 |
| Sheep & Goat | 1.0 |
| Cow & Buff | 3.0 |
| 3 | **Flexing endurance** |  | IS 5914 Part 6/Sec 1 |
| After 25,000 cycle, Dry | No crack |
| After 15,000 cycle, Wet | No crack and no salt spue |
| 4 | **Colour fastness to rubbing**  Gray scale rate **(***colour change of outside surface/Marring***)** |  | IS 6191 Part 4 |
| After 100 cycle, Dry, *Min* | 3 |
| After 50 cycle, Wet, *Min* | 3 |
| 5 | **Colour fastness to water,** Gray Scale Rate(colour change and staining of outside surface/Staining), *Min* | 3 | IS 6191 Part 2 |
| 6 | **Colour fastness to perspiration** (Contact Method), Gray scale rate(colour change and staining of outside surface/Staining), *Min* | 3 | IS 6191 Part 6 |