# *Scissors — Specification*

# SCISSORS — SPECIFICATION

## 1 SCOPE

This standard prescribes the requirements of material, dimension, workmanship and tests for stationery scissors, embroidery scissors, pinking scissors, tailor scissors, carpet scissors, household scissors, barber scissors, leather cutting scissors, trimming scissors, grape scissors, kitchen scissors, personal care and nail cutting scissors, kids scissors.

## 2 REFERENCES

The following standards are referred to made this draft:

| *IS No.* | *Title* |
|---|---|
| 989: 1982 | Specification for scissors for general Purpose. (*Second revision*) |
| 13193: 1992 | Thermoplastic polyester PET and and PBT for molding and extrusion Specifications. |
| 10910: 1984 | Polypropylene and its copolymers For its safe use in contact with foodstuffs, pharmaceuticals and drinking water |
| 10952: 2020 | Specification for Polypropylene Material for molding and extrusion. *(second revision)* |
| 13464: 1992 | Polyamide (nylon 66) material for molding and extrusion Specifications. |
| 17077: 2022 | Plastics - Acrylonitrile-butadienestyrene (abs) molding and extrusion materials: Part 1 designation system and Specifications (First revision). |
| 6911: 1992 | Stainless steel plate, sheet and strip-Specifications (First revision). |
| 1570: 1979 | Schedules for wrought steels-Part 2 Carbon steel (Unalloyed steel). Section 1Wrought products (other Than wire) with specified Chemical Composition and related properties. |
| 1501: 2002 | Method of Vickers hardness test For metallic materials. (Third revision) |
| 1586: 2012 | Metallic materials- Rockwell Hardness test. (Fourth revision) |
| 2062: 2011 | Hot rolled medium and high tensile Structural steel.-Specifications (Seventh revision) |
| *IS No.* | *Title* |
| 292: 1983 | Specifications for leaded brass Ingots and casting. (Second revision) |
| 1148: 2009 | Steel rivet bars (Medium and High Tensile) for structural purpose. (Fourth revision) |

## 3 MATERIAL

### 3.1 Blades

The material for the blade of scissors shall be of stainless of Grade 420 J1(X20 Cr13) , 420 J2(X30 Cr13), 430 grade of stainless steel or EN-1.4116 (X50 CrMoV15) grades of steel or carbon steel conforming to IS: 1570-1961 or any other food grade stainless steel or any other suitable material as agreed to between manufacturer and purchaser.

### 3.2 Handles

Type of handle and handle material used for the manufacturing of the scissors shall be as per Table 1.

### 3.3 Rivets, spring, washer, screw and nut

The material of rivet, spring, washer, screw and nut used for the manufacturing of the scissors shall be mild steel, brass, plastic or stainless steel, or any other suitable material as agreed to between manufacturer and purchaser.

**Table 1 Handles**
(*Clause* 3.2)

| Sr No. | Type of Handle Used | Material Used for the Handle |
|---|---|---|
| i) | Plastic handles | Acrylonitrile butadiene Styrene (ABS), Polybutylene terephthalate (PBT), Acrylonitrile styrene (AS), Polypropylene (PP), Nylon or any food grade plastic. |
| ii) | Forging handles | Carbon steel conforming to grade IS: 1570., Steel conforming to IS: 2062-1969*, Malleable iron castings conforming to IS: 2107-1977t or IS : 2108-1977. |
| iii) | Casting- handles | Zinc, Cast brass conforming to Grade 3 of IS : 292-1961 t , |

## 4 TYPE AND CLASSIFICATION

Scissors shall be of four types:

***Type 1:*** Scissors having blade of two-piece construction in which the inside portion is of high carbon steel forged, casted and welded to the casted handle of mild steel or Zinc.

***Type 2:*** Scissors forged from high carbon steel.

***Type 3:*** Scissors having blades entirely made of high carbon steel welded or riveted to mild steel or malleable iron handles.

***Type 4:*** Scissors having blades made of high carbon steel, riveted to brass handles.

***Type 5:*** Scissors having blade made of stainless steel and handle by injection molding.

### 4.1 Design of the Handle

The design of the handles of the scissors shall be as agreed between the manufacturer and the purchaser. When scissors are required to be supplied in sets, the design of the handles and general appearance of the items in a set shall match.

### 4.2 Shape and Dimensions

The scissors shall conform to the shape and dimensions shown in Fig. 1 to Fig 9. Scissors with different shape and dimensions may be supplied with prior agreement between the manufacturer and the purchaser. However, the scissors shall conform to the other provisions laid down in this standard.

**4.2.1** *General Scissors*

**4.2.1.1** *Stationery scissors* (*see* Fig. 1)

**4.2.1.2** *Embroidery scissors* (*see* Fig. 2)

**4.2.1.3** *Pinking Scissors (see Fig. 3)*

**4.2.1.4** *Tailor's scissors* **(***see* Fig. 4)

**4.2.1.5** *Carpet scissors (see Fig. 5)*

**4.2.1.6** *Household scissors* (*see* Fig. 6)

**4.2.1.7** *Barber's scissors (see Fig. 7)*

**4.2.1.8** *Leather cutting scissors (see Fig. 8)*

**4.2.1.9** Trimming scissors (see Fig. 9)

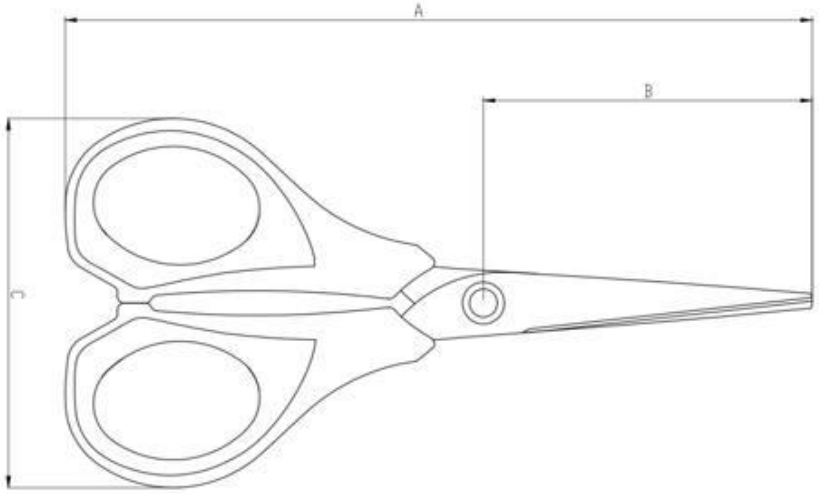
**4.2.1.10** Grape Scissors (see Fig. 10)

**4.2.1.11** *Kitchen scissors (see Fig. 11)*

**4.2.1.12** *Personal care and Nail cutting scissors (see Fig. 12)*

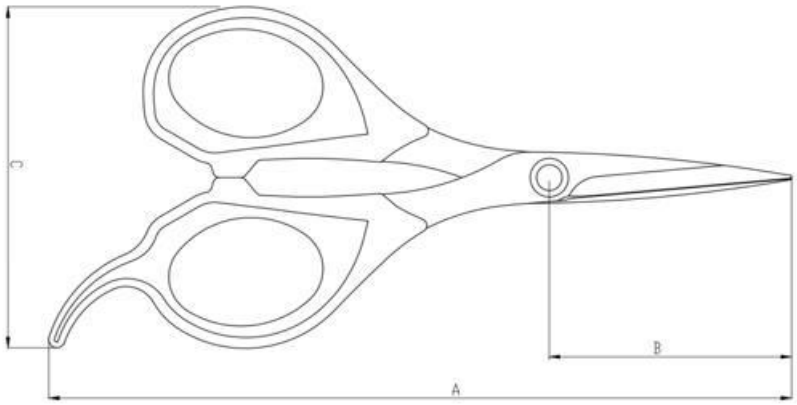
**4.2.1.13** *Kids scissors (see Fig. 13)*

FIG. 1 STATIONERY SCISSORS



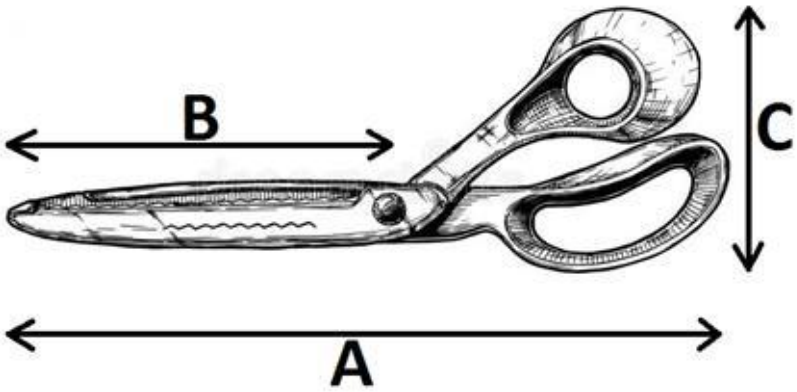

| *Type of Scissor* | *Dimensions in mm* | | | |
|---|---|---|---|---|
| | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 75-250 | 30-120 | 50-100 | 1.5-2.5 |

FIG. 2 EMBROIDERY SCISSORS



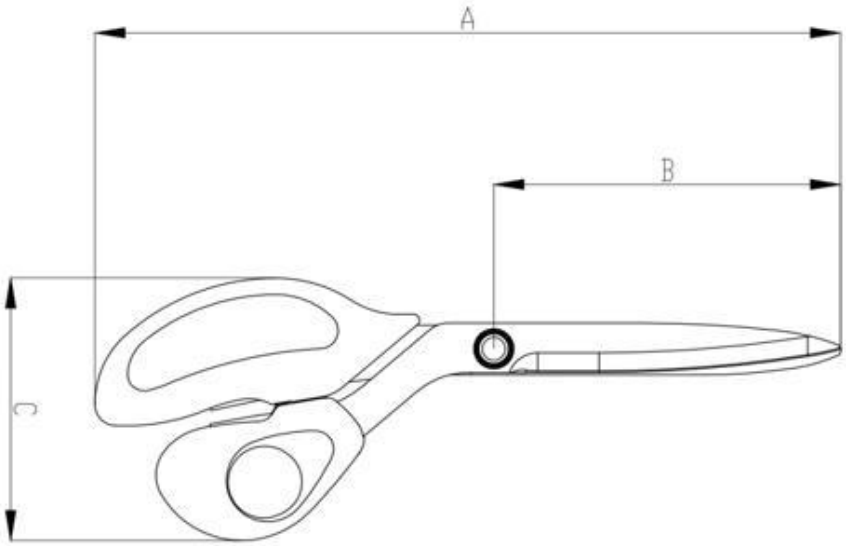

| | *Dimensions in mm* | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 50-120 | 30-70 | 50-100 | 1.5-2.5 |

FIG. 3 PINKING SCISSORS



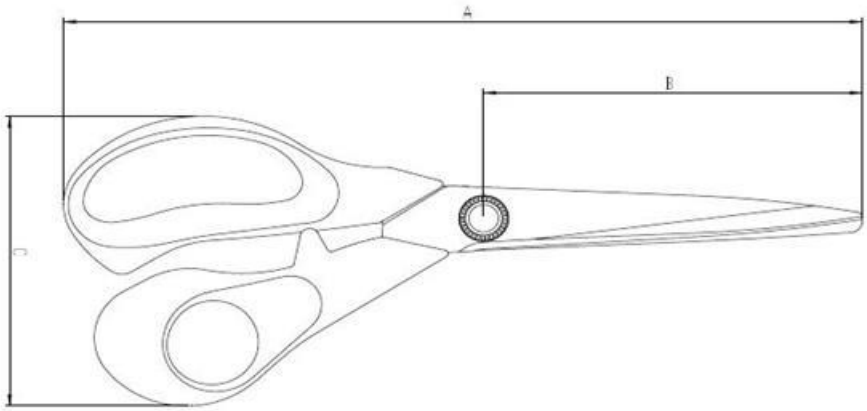

| | *Dimensions in mm* | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 100-300 | 40-150 | 50-150 | 1.5 -3.5 |

FIG. 4 TAILOR'S SCISSORS



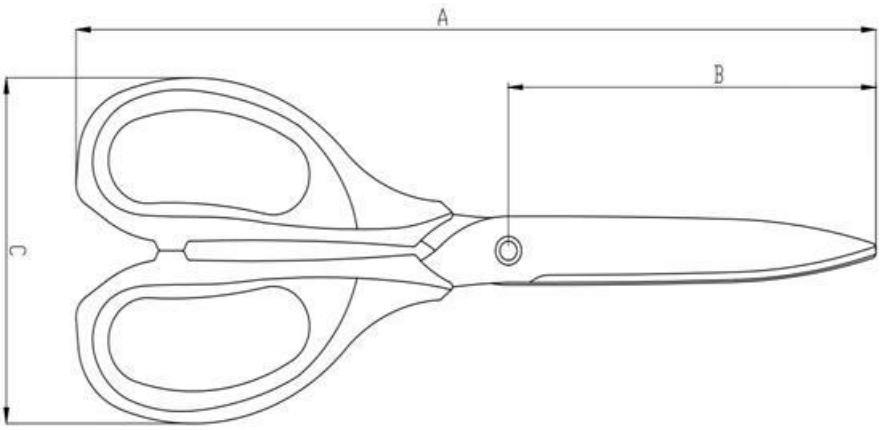

| | *Dimensions in mm* | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 100-400 | 30-200 | 50-150 | 2.5-4 |

FIG. 5 CARPET SCISSORS.



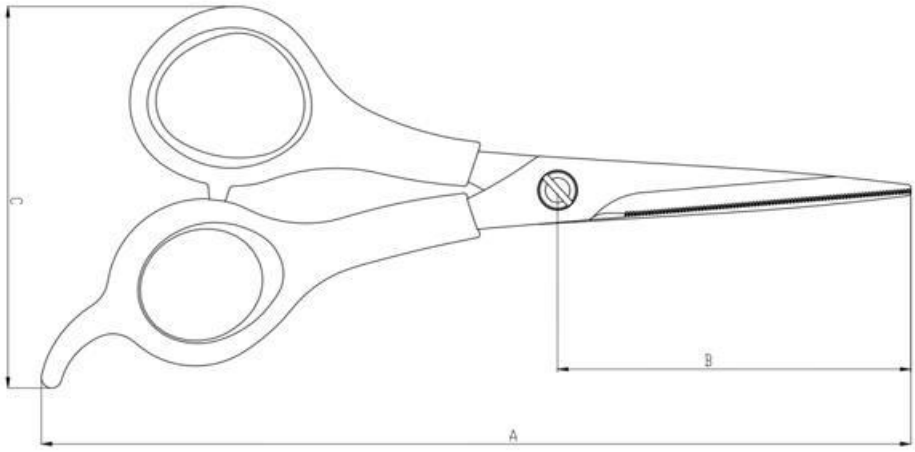

| | Dimensions in mm | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 100-300 | 40-150 | 50-150 | 2.0 -3.5 |

FIG. 6 HOUSEHOLD SCISSORS



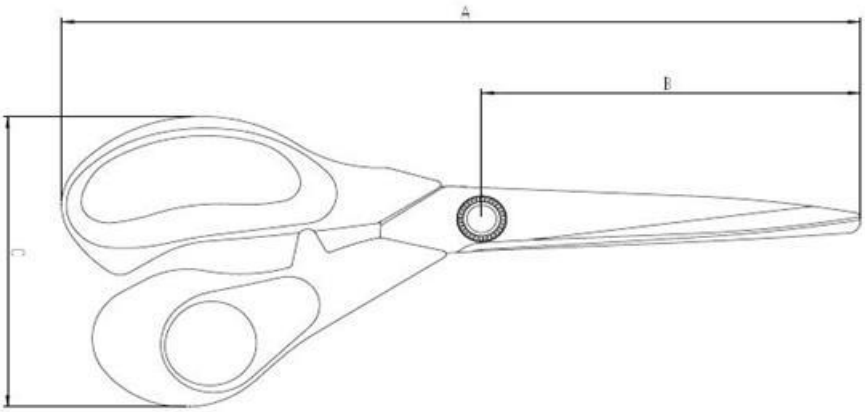

| | Dimensions in mm | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 75-250 | 30-120 | 50-100 | 1.5-2.5 |

FIG. 7 BARBER'S SCISSORS



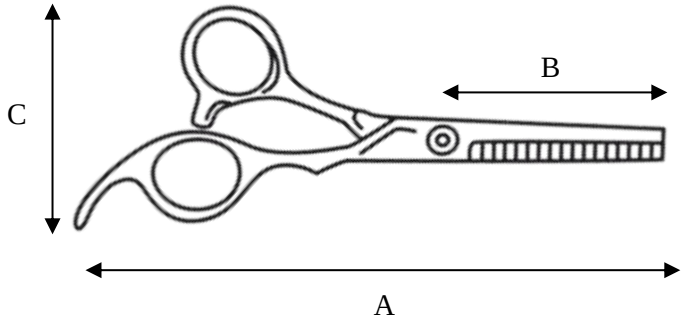

| | *Dimensions in mm* | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 100-250 | 30-120 | 50-150 | 1.5-2.5 |

FIG. 8 LEATHER SCISSORS.



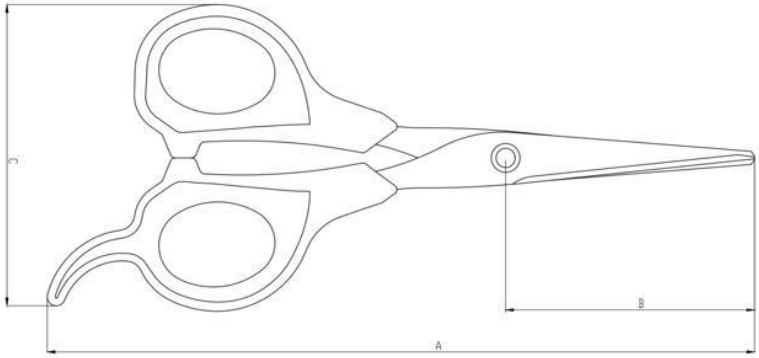

| | *Dimensions in mm* | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 100-300 | 40-150 | 50-150 | 2.0 -3.5 |

FIG. 9 TRIMMING SCISSORS



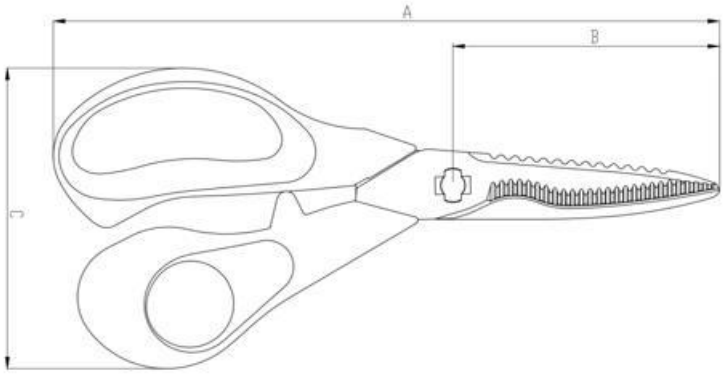

| | Dimensions in mm | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 100-250 | 30-120 | 50-150 | 1.5-2.5 |

FIG. 10 GRAPE SCISSORS



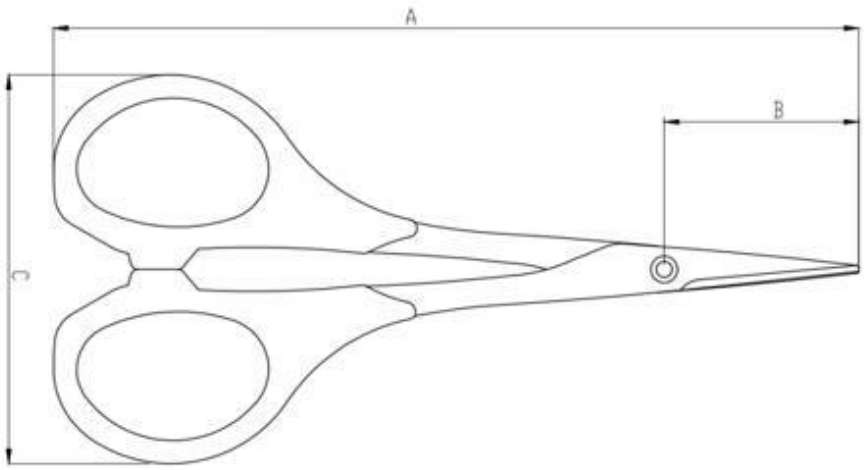
| | Dimensions in mm | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 100-200 | 40-100 | 50-150 | 1.5-2.5 |

FIG. 11 KITCHEN SCISSORS



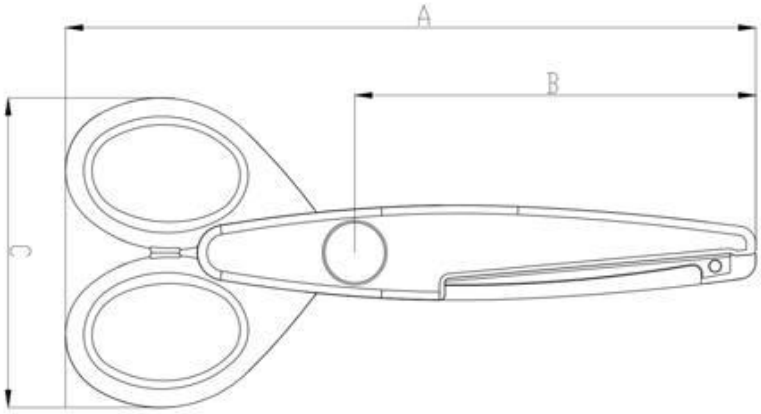

| | Dimensions in mm | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 100-250 | 30-120 | 50-100 | 2-3.5 |

FIG. 12 PERSONAL CARE AND NAIL CUTTING SCISSORS




| | Dimensions in mm | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 50-250 | 30-120 | 25-100 | 1.5-3.5 |

FIG. 13 KIDS SCISSORS




| | *Dimensions in mm* | | | |
|---|---|---|---|---|
| *Type of Scissors* | *Overall Length* (A) | *Length from pivot hole to tip* (B) | *Width of Handles* (*C*) | *Blade Thickness* |
| Scissors | 75-200 | 40-100 | 50-150 | 0.6-0.8 |

## 5 MANUFACTURE

Scissors shall be manufactured to the corresponding shapes or as agreed to between manufacturer and purchaser.

All of the press stamping, forging, casting shall be sound. The handles when made of mild steel or malleable iron shall be soundly welded or neatly riveted to the blades. The finger loops shall be designed properly.

Note: Curvature may be provided on scissors blades as agreed to between manufacturer and purchaser depending upon the scissors requirement to fulfil any particular application.

Scissors shall meet the requirements as given in Table 3.The cutting edge shall be sharp and ready for use. The blade shall be well and evenly hardened and tempered.

### 5.1 HARDNESS

The blades shall be evenly hardened and tempered to attain hardness within a range of 35 – 60 HRC. The hardness shall be determined according to IS 1501 or IS 1586 as applicable.

### 5.2 GRINDING

Scissors blades shall be properly grinded from cutting edges in angles ranges from 40-85 degree with respect to their use and performance. Cutting edge angle should be in ± 5° range within a single scissors.

The blades shall be free from rough grinding marks and shall be finished bright all over. The handles shall be finished smooth and their sharp edges and corners shall be rounded. The entire length of cutting edge shall be sharp and ready for use. The blade and the handle shall be in good alignment.

## 6 WORKMANSHIP AND FINISH

Scissors shall be free from cracks, seams, burns, flaws and other defects. Scissors shall be finished smooth and sounded.

Scissors shall have joints which move smoothly and shall neither too loose nor too tight, it shall be possible to close and reopen the scissors easily with two or three fingers with respect to shape and size of scissors. Scissors shall be working freely without any undue play or stiffness. The Scissors shall be supplied sharpened and ready for use.
The scissors may be supplied in different color coating as agreed to between manufacturer and purchasers.

## 7 TEST

### 7.1 CUTTING ABILITY TEST

Each pair of scissors shall be tested by cutting media in accordance to the scope defined in Table no 3. In doing so, the scissors shall be opened wide as much possible and then gradually brought to the closed position. The scissors shall cut the media neatly.

## 8 SAMPLING

**8.1** The number of scissors to be selected from a lot for ascertaining conformity to this standard shall be as agreed to between the manufacturer and purchaser.

A recommended sampling scheme and the criteria for the conformity for scissors is given in table 4.

**8.2** In any consignment scissors of same type of handle, shape and size, manufactured from the same material under relatively similar conditions of manufacture shall be grouped together to constitute a lot.

**8.3 Number of test and criteria for conformity**:

**8.3.1** The scissors selected at random according to **8.1** shall be examined for the requirements of **4** and **6**.

The scissors failing to satisfy any or more of these requirements shall be regarded as defective. The lot shall be considered as conformity to the requirements of **4** and **6**, if number of defective scissors in the sample does not exceed the number given in Table 4.

## 9 MARKING

Each scissors or packing thereof shall be legibly marked with the following:

a) Manufacturer’s name, initials or registered trade mark;

b) Made in India.

c) Or content agreed to between manufacturer and purchaser.

## 10 PRESERVATIVE TREATMENT

The blade surface of scissors shall be coated with suitable rust preventive oil.

## 10 PACKAGING

Each scissors shall be packed in blister, pouch or any other suitable packing as agreed to between manufacturer and purchaser.

**Table 3 Specific Requirements of Scissors**

| Scissors | Media | Number of Layers |
|---|---|---|
| Stationery scissors | Paper, Envelope | 1 |
| Embroidery scissors | Thread and fabric | 1 |
| Pinking Scissors | Paper, craft Paper, Glaze paper etc | 1 |
| Tailor's scissors | Fabrics | 1 |
| Carpet scissors | Fabrics, Leather | 1 |
| Household scissors | Paper, Thread, Sachets, Milk Pouches, Thin cardboard, Ribbons, Envelope, Flower stems etc. | 1 |
| Barber's scissors | Artificial hairs | 10-15 strands |
| Leather scissors | Cotton cloth | 2 |
| Trimming scissors | Artificial hairs | 5-10 strands |
| Grape scissors | Cotton cloth | 2 |
| Kitchen scissors | Cotton cloth | 2 |
| Personal care and nail cutting scissors | Silk cloth | 1 |
| Kids scissors | Paper, craft Paper, Glaze paper etc | 1 |

**Table 4 Sample Size and Criteria for Conformity**

| Number of Scissors in a Lot | For Clause no 4 & 6 | | For Clause No. 5.1, 7.1 & 10 | |
|---|---|---|---|---|
| | Samples Size | Acceptance Number | Sample Size | Acceptance Number |
| Up to 50 | 5 | 0 | 1 | 0 |
| 51 to 150 | 13 | 1 | 2 | 0 |
| 151-500 | 32 | 3 | 2 | 0 |
| 501-1000 | 50 | 5 | 3 | 0 |
| 1001-3000 | 80 | 7 | 3 | 0 |
| 3001-10000 | 125 | 10 | 5 | 0 |
| 10001 and above | 200 | 14 | 5 | 0 |