

BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा
द्रव्यमान और आकार के आधार पर चमड़ी और खाल की ग्रेडिंग
— दिशानिर्देश
(IS 12435 का पहला पुनरीक्षण)

Draft Indian Standard

**GRADING OF HIDES AND SKINS ON THE BASIS
OF MASS AND SIZE — GUIDELINES**

(First Revision of IS 12435)

(ICS 59.140.20)

Leather, Tanning Materials and Allied Products Sectional Committee, CHD 17

Last Date for Comments: 31th August 2025

FORWORD

(Formal clause will be added later)

This standard was first published in 1988 by taking considerable assistance from the following sources:

- Report on the marketing of hides in India 1967, Directorate of Marketing and Inspection, Ministry of Food & Agriculture, Community Development & Cooperation, Government of India; and
- Report on the Marketing of Skins in India (Revised Edition), 1955, Directorate of Marketing and Inspection, Ministry of Food and Agriculture, Government of India.

In this revision, the Committee has made slight modifications to the classifications for buffalo, without changing the core structure. These changes align with the prevailing practices followed by Indian tanners. Additionally, various editorial corrections, and references have been updated to ensure accuracy and relevance in the revised standard.

Hides and skins are the basic raw materials for the leather industry. The value of the finished leather mainly depends on the cost of the raw materials like hides and skins. The other essential factors include their quality, mass, area, and the types of finished leathers produced from them.

It is well established that the raw hides and skins can be converted into different types of leather possessing certain special characteristics and used for various end uses. For example, calf-skins are ideal for producing quality shoe upper leather, heavier cow hides for boot upper, larger area bovine hides for upholstery leather and oxen/buffalo hides for industrial leathers. To meet such specific requirements hides and skins are graded worldwide based on mass and size, in addition to the other criteria of classifications: quality, cure, animal breed, and source or origin.

In India, cow and buffalo hides and the skins of their respective calves are graded by the tanners into different categories depending on their mass. Similarly, the grading of goat and sheep skins are based on area (generally the length). Though a certain amount of uniformity exists in the classification of goat and sheep skins, no uniform method of classification of hides on a mass basis exists in India today. Such classifications may vary from tanner to tanner, dealers, and regions. Considering the tanning industry's requirements, the Leather Sectional Committee has formulated and revised this Indian Standard to develop a widely acceptable classification. This guideline will benefit the tanners in classifying the hides and skins in India regarding uniformity or consistency. However, the supplier and the purchaser can decide on the specific or detailed characteristics and or as agreed between them.

Draft Indian Standard

**GRADING OF HIDES AND SKINS ON THE BASIS OF MASS
AND SIZE — GUIDELINES**

(First Revision)

1 SCOPE

This standard prescribes guidelines for grading cow and buffalo calf skins, and buffalo hides on the basis of mass, and goat and sheep skins on the basis of length along the backbone line.

2 REFERENCES

The standards listed in Annex A contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of these standards.

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 1640 shall apply.

4 FLAYING, CURING AND PRESERVATION OF HIDES AND SKINS

The flaying, curing, and preservation of cow and buffalo hide, their calf skins, and goat and sheep skins shall be in accordance with IS 9663 and IS 7656 (Part 1) and IS 7656 (Part 2) respectively. The hides and skins thus preserved shall have moisture content in the range of 40 percent to 50 percent when determined in accordance with A-3 of IS 5570.

5 GRADING OF COW AND BUFFALO CALF SKINS AND HIDES ON THE BASIS OF MASS

5.1 In India, cow and buffalo hides include the hides of both female and castrated males. Bull hides are rarely available. Similarly, calf skins include the skins of both the male and female calves.

5.2 The cow, buffalo hides, and calf skins are primarily available in wet salted conditions in India. A very meagre amount of the hides is available in remote or isolated areas, either in the dry salted or in the dried stage. Such dry salted or dry hides are not generally used from regular raw material sources for commercial tanning purposes in India. Similarly, no green or fresh hide is available to the tanners for processing. In many countries, hides and calf skins are obtained as by-products from the slaughter house. The green weight is taken either in the slaughter house itself or by the raw hide dealers after procurement. Conversely, in India, more than 80 percent of cattle hides are aggregated from fallen animals scattered throughout the countryside or villages. Given this, it is impracticable to record the green weight of the hides from the primary sources. It is thus apparent that the classification of the wet salted hides and skins prescribed here will meet the requirements of the majority of Indian tanners.

5.3 Determination of the Mass of Salted Hide/Skin

5.3.1 Procedure

Unfold every hide/skin of the batch, and shake vigorously to let off the loose salt on the surface. Then, drive out the adhered salt by knocking it with flesh side down against the ground or on a rectangular horse (40 cm in height). The salt still adhered firmly may be removed further using brush (with fibrous bristles) sans sharp edges or tips. Weigh the hides individually to determine the category. The hide should be free from extraneous fat and flesh. Trim the hide as prescribed in IS 9160. The mass of each hide is expressed to the nearest 0.5 kg.

5.4 Classification

Cow and buffalo hides and their calf skins are classified on the basis of mass as shown in Table 1.

Table 1 Grading of Cow and Buffalo Hides and Their Calf Skins on The Basis of Mass

(Clause 5.4)

Sl No.	Hide/Skin	Wet Salted (kg)
i)	Cow calf skin	1.5 to 5.0
ii)	Cow hides	
	a) Light	5.0 to 10.0
	b) Medium	10.0 to 15.0
	c) Heavy	15.0 to 20.0
	d) Extra heavy	Above 20.0
iii)	Buffalo calf skin	2.0 to 11.0
iv)	Buffalo hides	
	e) Light	11.0 to 18.0
	f) Medium	18.0 to 25.0
	g) Heavy	25.0 to 32.0
	h) Extra heavy	32.0 to 39.0
	i) Super extra heavy	Above 39.0

6 GRADING OF GOAT AND SHEEP SKINS ON THE BASIS OF LENGTH ALONG THE BACKBONE LINE

6.1 Goat and sheep skins are generally available only in wet salted conditions in India. Most tanners judge the skin's area grading by measuring the length from the tail root to the throat along the backbone. In isolated cases, the tanners sometimes measure the area along the backbone and across to meet specific requirements. Similarly, in rare cases, a few tanners will exercise the option of weighing the skins besides area measurement to realise the particular objectives. Since most tanners will decide by measuring along the backbone, the same procedure is highlighted here with the illustration in Fig 1.

6.2 Procedure for Measurement of the Length of the Skin

Lay the skin flat and fold lengthwise on a table or flat surface. Measure the length along the backbone from the root of the tail to the point where the skin of the front part of the throat is the widest when determined at right angles to the fold. Refer an illustration through a diagram as shown in Fig. 1.

6.3 Classification

Goat and sheep skins are classified based on the length of the backbone line, as shown in Table 2.

Table 2 Grading of Goat and Sheep Skins On The Basis of Length Of Backbone Line

(Clause 6.3)

Sl no.	Skin	Length (cm)
i)	Kid	Below 71.0
ii)	Small	71.0 to 82.0
iii)	Medium	82.0 to 90.0
iv)	Large	90.0 to 102.0
v)	Extra large	Above 102.0

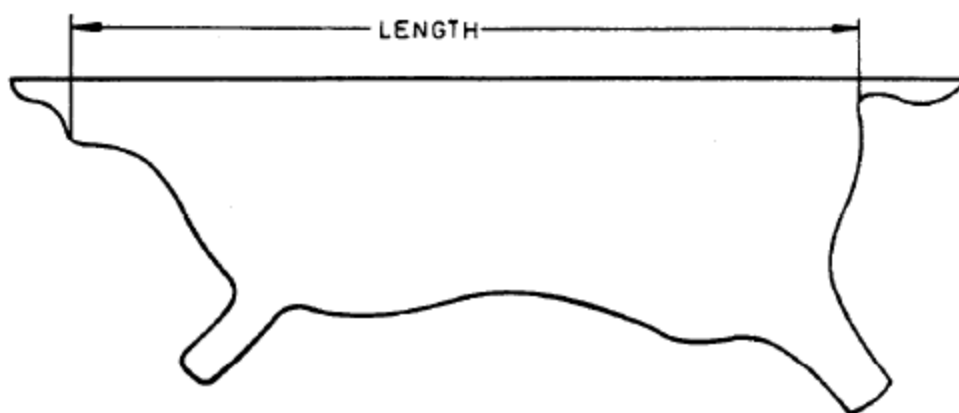


FIG. 1 MEASUREMENT OF LENGTH OF GOATS AND SHEEP SKIN

ANNEX A

(Clause 2)

LIST OF REFERRED STANDARDS

<i>IS/ISO No.</i>	<i>Title</i>
IS 1640 : 2007	Glossary of terms for hides, skins and leather (<i>first revision</i>)
IS 5570 : 1987	Specification for pickled goat skins (<i>first revision</i>)
IS 7656	Code of practice for curing and preservation of cattle hides and goat and sheep skins by wet salting method
(Part 1): 2024/ ISO 22244:2020	For Raw Hides (<i>first revision</i>)
(Part 2): 2024/ ISO 22284:2020	For Goat and Sheep Skins (<i>first revision</i>)
IS 9160 : 2023	Trimming of Indian cattle hides - Guidelines (<i>first revision</i>)
IS 9663 : 2023	Flaying of Hides and Skins — Code of Practice (<i>first revision</i>)