

BS EN 16055:2012



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Leather — Raw bovine hides and skins — Description, presentation and preservation

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National foreword

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A list of organizations represented on this committee can be obtained on request to its secretary.

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Cuire - Peaux brutes de bovins - Description, présentation et conservation

Leder - Rinderrohhäute - Beschreibung, Präsentation und Konservierung

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Foreword

This document (EN 16055:2012) has been prepared by Technical Committee CEN/TC 289 "Leather", the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2012, and conflicting national standards shall be withdrawn at the latest by July 2012.

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1 Scope

This European Standard establishes the following for raw bovine hides and skins intended for the manufacture of leather:

- terms and definitions;
- rules for presenting raw hides and skins.

It applies to fresh and cured bovine hides and skins.

It is not the aim of this document to interfere with the normal commercial agreement between the buyer and the hide and skin supplier. This European Standard may be used in case of disagreement between the two parties.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1 Raw bovine hides and skins

2.1.1

calf skin

skin from an immature bovine animal

2.1.2

cattle hide

hide from an adult bovine animal

2.1.3

bull hide

hide of a bovine male (not castrated)

2.1.4

cow hide

hide of a female bovine which has borne calves

2.1.5

slink/slunk

skin of an stillborn calf

2.1.6

ox hide

hide of a castrated bovine male

2.1.7

heifer hide

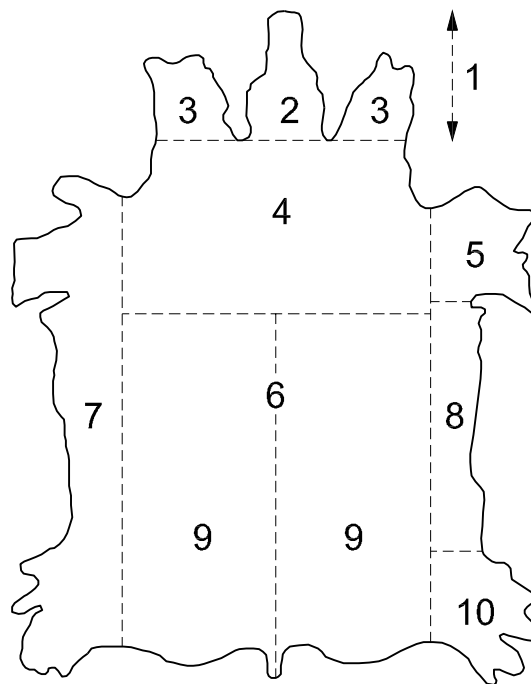
hide of a bovine female which has not borne calves

2.1.8

bovine hide and skin presentation or “hide pattern”

refers to the shape standard given to the skin or hide according to its future use

2.1.9
different parts of the hide or skin (see Figure 1)



Key

- 1 Head
- 2 Face
- 3 Cheek
- 4 Shoulder
- 5 Foreshank
- 6 Butt
- 7 Belly
- 8 Bellymiddle
- 9 Bend
- 10 Hindshank

8+10: $\frac{3}{4}$ Shank

Figure 1 — Parts of the hide and skin

2.1.10

preservation

treatment to protect the hide against putrefaction after flaying until it is put into tannery processing, for example by curing, chilling or drying

2.1.11

trimming

process of cutting off unwanted parts from the hide or skin and giving it the agreed standard of shape or "trim"

2.1.12

defect

general term for any damage on raw or preserved hide or skin likely to reduce the quality of the leather produced

2.2 Defects

2.2.1 Flaying defects

2.2.1.1

cut

mark made on the hide or skin by a knife or flaying tool on the flesh side which has cut into the dermis or skin substance, not completely perforating the hide or skin (see Figure 2)

2.2.1.2

hole

flaying damage caused by a knife or flaying tool on the flesh side, completely perforating the hide or skin (see Figure 2)

2.2.1.3

gouge

loss in substance of the hide or skin on the flesh side caused by a knife or flaying tool, without completely perforating it

2.2.1.4

badly cut head

head cut along a line that is not perpendicular to the longitudinal axis

2.2.1.5

badly shaped shanks

shanks cut off along a line which is not perpendicular to the opening cut of the leg or which is too long as defined by the standard; shanks unusable (see Figure 3)

2.2.1.6

improper bleeding

incomplete and poor bleeding of the animal at the time of slaughter resulting in coagulated blood remaining in blood-vessels, visible on the flesh side of the skin

2.2.1.7

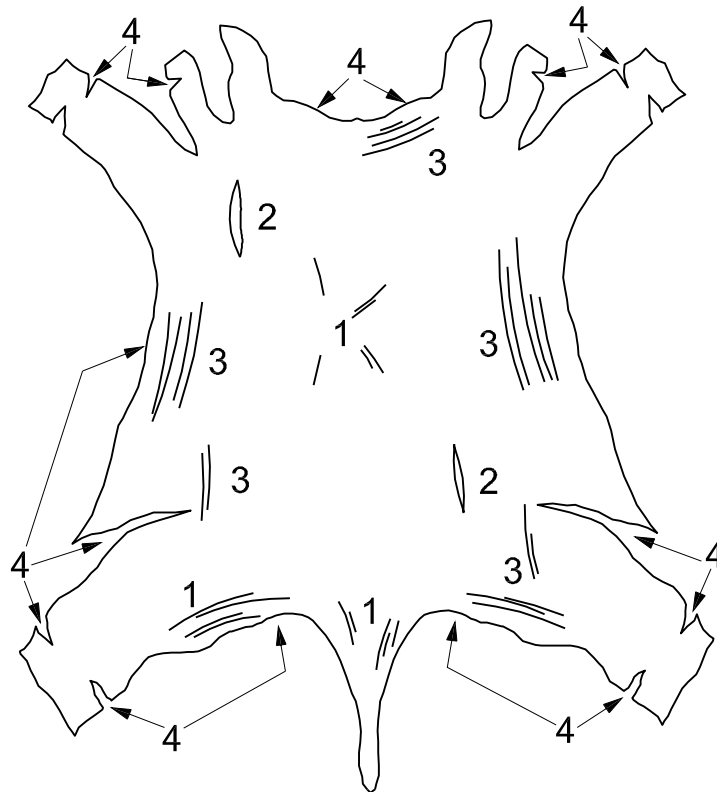
poor pattern

any deviation from the regular shape of hide or skin after cutting and trimming

2.2.1.8

surface breaks (grain side)

occurs on the hide when hides are removed from the animals with pulling machines



Key

- 1 Cut
- 2 Hole
- 3 Surface breaks
- 4 Wrong opening cut

Figure 2 — Example of defects

2.2.2 Defects caused on the hide or skin of the living animal

2.2.2.1 mechanical defects

defects caused by brand marks, various scratches (barbed wire, bramble, damage from transport or dragging, marks from cattle comb, rope marks, etc.), goading hits, surgical operations, that can be open or healed (scars)

2.2.2.2 dung or urine defect

dung excrement or urine damage visible on the hide or skin which has corroded or burnt the grain side of the hide or skin

2.2.2.3 damage caused by parasites

damage caused by sucking and biting parasites, such as mites, lice, ticks, open and healed warble holes

2.2.2.4 damage caused by diseases

damage caused by some forms of micro-organisms, such as bacteria, fungi (e.g. ringworm) or viruses (e.g. warts)

2.2.2.5

wrinkle mark

shrunken, shrivelled or wrinkled grain surface of hide or skin

NOTE Wrinkle marks are also growth marks caused by old age or under nourishment of the animal and adversely affect the grain surface of the hide or skin.

2.2.2.6

wart

growth of the hide or skin, varying in size and shape

2.2.2.7

other grain side damage

presence of wounds or abscesses, after-effects of injections

2.2.3 Preservation defects

2.2.3.1

bad curing, heating and hair slip

premature loosening of hair by putrefaction of hides and skins, sometimes associated with ammoniac odour

2.2.3.2

salt spots and stains

small white or light brown cavities, firmly encrusted into the skin, that leave a crater-like space after tanning

2.2.3.3

inadequate salting

lack of salt on the surface of the fresh hide by inadequate salting or bad conditions of temperature and storage time before shipment, resulting in hair slip

2.2.3.4

defects caused by metallic salts

spots and damage caused by the deposit of metallic compounds, particularly iron salts

2.2.3.5

red heat

red to violet discoloration, often on the flesh side of the salted hides and skins caused by halophilic bacteria

2.2.3.6

purple spots

purple coloration found on the flesh side of salt-cured hides

2.2.3.7

run flesh

small depressions and channels visible on the flesh side where tissues have decomposed due to putrefaction in the raw hide or skin

2.2.3.8

sun blisters

kind of sunburn effect on the hide or skin, the outer layers are drying fast capturing moisture in the inner layer, there hydrolysis can occur, leading later to blistering (separation of the layers)

2.2.3.9

dermestes

hollowed out spaces or perforations caused by the Dermestes beetle and larvae on the flesh side and /or grain side of the hide and skin during storage

3 Rules for presenting raw bovine hides and skins

3.1 General

The presentation of raw bovine hides and skins shall comply with the following.

The skin or hide shall be presented without the head (skin of head is cut in a straight line behind the ears), with short legs (cut at a right angle just above the knee and the hock), with the tail cut at the butt (no more than 10 cm away), without sexual organ, without dung and without excess of fat or flesh.

The skin part covering the udder is cut as near as possible to avoid area loss of the skin.

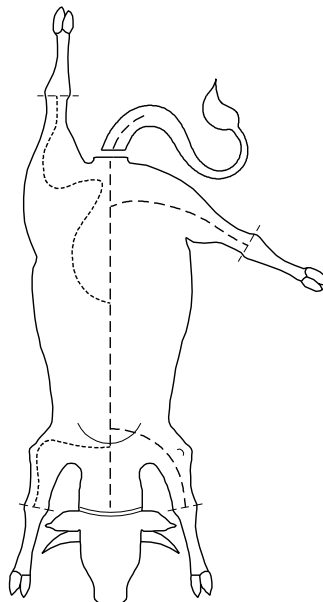
3.2 Requirements

3.2.1 Bovine hides and skins (without cow hides)

Each hide and skin should be trimmed as shown in Figure 3 "Good opening cut".

Description of the trimming steps for **bovine hides** and **skins** (see Figure 3):

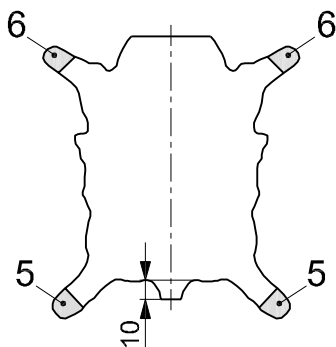
- **Opening cut of the belly:** straight cutting line from the anus over the navel up to the mouth;
- **Opening cut of the hind legs:** along the back side of the hind legs; this cut meets the belly cut in a right angle in the middle between anus and udder or scrotum respectively;
- **Opening cut of the forelegs:** after removing the feet, the skin is loosened along both sides of the belly cut line (approx. 10 cm each). The cut determining the shape of the hide is then made along the inner sides of the forelegs and has to meet the belly cut in the middle of the chest.



- Wrong opening cut
- Good opening cut

Figure 3 — Description of trimming of raw bovine hides and skins

Each **bovine hide and skin** shall be presented in accordance with the requirements indicated in this document (see Figure 4).



Key

- 5 Hind legs
- 6 Forelegs

Figure 4 — Presentation of raw bovine hides and skins

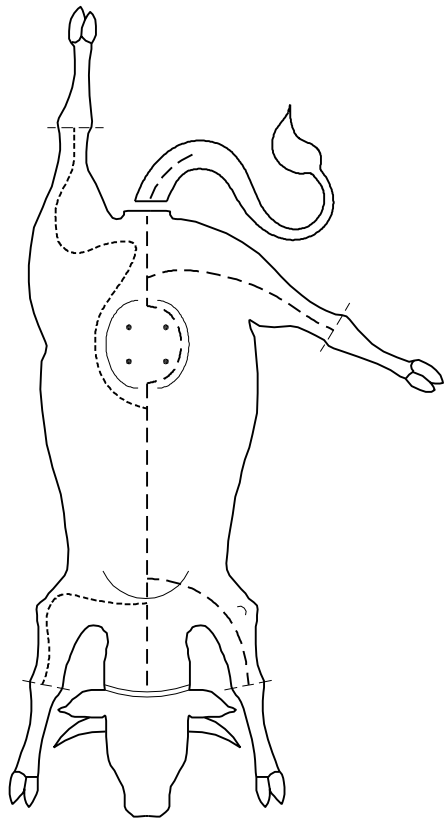
Requirements:

- Short shanks
- No tail (less than 10 cm)
- No head (the cheeks should be cut, unless special requirement)

3.2.2 Cow hides

In the case of cow hides, the opening cuts of the hide and the trim correspond to Figure 3 with the following exception:

The opening cut of the belly does not follow a straight cutting line from the anus to the navel but as close as possible around the udder. The skin part covering the udder, shall be kept with the rest of the skin, **notably for enabling the further valorisation of the whole hide**, the cut shall be made a maximum of 5 cm over the teats (see Figure 5).



- Wrong opening cut
- Good opening cut

Figure 5 — Description of trimming of raw cow hides

Annex A (informative)

Guidelines to preserve raw bovine hides or skins

A.1 Scope

The purpose of this annex is to define the rules to be followed when preserving raw bovine hides and skins intended for the tanning trade.

It applies to all bovine hides and skins obtained after slaughtering and flaying of the animal.

Each hide or skin is designated by the name of the animal it comes from: e.g. cattle hide or calf skin.

A.2 Preservation method

The most common method used to preserve bovine hides and skins is the salting in piles method. Brining and chilling can also be applied.

A.3 Defects to be avoided and precautions to be taken

The defects likely to affect hides and skins can be divided into two different categories according to their origin:

- those caused by microbes in bad curing or **bad chilling**, such as red heat and purple stains;
- those caused by chemicals, such as pits on the flesh.

To prevent these type of defects appearing, sodium carbonate should be added to the salt **when curing or brining**.

A.4 Rules for preservation by salting in pile method

This method involves sufficiently dehydrating the raw hides and skins with salt in order to prevent the development of putrefaction bacteria and then storing these treated hides and skins by piling them one on top of the other in suitable premises.

To ensure an optimal preservation of the hides and skins, i.e. to prevent the defects mentioned above from appearing (see A.3), the following rules should be followed:

- a) ideally, animals should be kept clean, if not it is preferable that the animals are cleaned before or immediately after slaughter using any technique that will not damage them;
- b) after the hide or skin has been cooled and cleaned, carry out the salting as soon as possible and no more than 5 hours after the animal has been flayed, taking into account the ambient temperature;
- c) additive products known to be efficient should be mixed with the salt homogeneously before use;

- d) never use any salt that has already been used, including the salt that was brushed off the salted hides and skins when they were received;
- e) for large hides, use medium size salt of between 1,25 mm and 3,15 mm. For calf skins use salt of between 0,4 mm and 1 mm;
- f) in order to obtain maximum dehydration, the quantity of salt used shall be at least equivalent to 40 % of the mass of the hides or skins and it shall be spread evenly onto the flesh surface of each one;
- g) pile up the hides and skins being careful to open them out;
- h) the height of the piles of opened out hides and skins shall not exceed 1,5 m. Make up these piles in such a way as to facilitate the elimination of the brine produced by the dehydration;
- i) leave the last hide or skin salted in the pile for at least 15 days;
- j) when packaging for shipment, the flesh side of the hide or skin used as a wrapping shall face outwards;
- k) the preservation and storage of the salted hides and skins shall be carried out in a cool premises where there is very little light and ventilation and where the relative humidity is at least 70 %.

A.5 Rules for preservation by brining

This method involves sufficiently dehydrating the raw hides and skins with **brine** in order to prevent the development of putrefaction bacteria and then storing these treated hides and skins by piling them one on top of the other in suitable premises.

The operation consists of agitating the hides in a brine solution; under these conditions, the sodium chloride quickly enters the hide and part of the water content of the hides is displaced into the bath. The motion and friction between the hides washes away contamination by blood, urine and manure.

However, to minimize dirt in the brining process, it is advisable to introduce the hides into a paddle with cold water firstly in order to wash them.

Process:

- a) The clean fresh hides and skins are placed in large vats containing an adequate amount of saturated brine to cover the immersed hides. The brine should contain 33 kg of common salt for each 100 kg of water, preferably at a pH of 5,0, and a temperature between 15 °C to 21 °C. The relation between hides/skins and brine must be 1 to 5 or higher.
- b) The treatment for heavy hides must be for a duration of 15 h to 16 h. During this process, the salt enters the hide almost exclusively by the flesh side.
- c) During brining, the hide is subject to a partial dehydration and the extracted moisture dilutes the brine. For this reason, it is necessary to add solid salt to maintain the salt brine concentration.
- d) Once the operation is finished, the hides are removed by means of a mechanical device that consists of an endless chain equipped with hooks.
- e) A lone worker can attach hides by means of a hook to the moving chain which pulls it from the bath, draining part of it. Then the hide is automatically loaded into a dump truck to be transported to the cool storage area.

A.6 Rules for preservation by chilling

To ensure an optimal preservation by chilling hides and skins the following rules should be followed:

A.6.1 Chilling with ice

- a) after flaying, add 5 kg ice/hide without delay;
- b) store in boxes in a cold-storage room with a max. temperature of 4 °C;
- c) max. storage time: 1 month.

A.6.2 Chilling by hanging in a cold-storage depot

- a) transport to the storage depot within 6 hours; better chilling with ice in the slaughterhouse according to A.6.1 a);
- b) hang in a cold-storage depot with max. temperature of 3 °C;
- c) max. storage time: 2 weeks.

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