



# Ethiopian TVET-System



## **Basic Leather Garments and Goods Production Operations LEVEL I**

Based on May 2012 Occupational Standards

May, 2020



**Module Title: Understanding of Materials in Leather Garments and Goods**

**TTLM Code: IND BLG1 TTLM 0919V1**

**This module includes the following Learning Guides**

**LG15: Identification of Leather**

**LG Code: IND BLG1 M 04L1LG15**

**LG16: Identify different types of accessories**

**LG Code: INDBLG1M04L2LG16**

**LG17: Determine uses and performance of leather and accessories**

**LG Code: IND BLG1 M04L3LG15**

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## Instruction Sheet

## LG15: Identification of Leather

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics

- Identification of leather used in leather garment and goods
- Sources and types of leather
- Characteristics of leather
- Common defects and problems of leather
- Possible causes for common defects in leather
- Identifying regions of leather and their qualities
- Types of surface finishes used on leather

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Identify various regions of leather and their qualities and identify sources of leather.
- Describe possible causes for common defects in leather
- Identify Leather used in leather garments and goods production.
- Identify common defects and problems of leather.
- Identify types and sources of leather..
- Identify characteristics of leather

### Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 22
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1” in page 6.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Instruction #2.
7. Accomplish the Self-check 2 in page 10

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8. Read the information written in the “Information Sheet 3”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
9. Accomplish the “Self-check 3” in page 13.

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## Information Sheet-1

## Identification of leather

### 1.1 Identification of leather used in leather Garment & Goods production

Leather is a durable and flexible material created by tanning animal rawhide and skins. The most common raw material is cattle hide. It can be produced at manufacturing scales ranging from traditional to modern industrial scale.

Leather is used to make a variety of articles, including footwear, automobile seats, clothing, bags, book bindings, fashion accessories, and furniture. It is produced in a wide variety of types and styles and decorated by a wide range of techniques. The earliest record of leather artifacts dates back to 2200 BC.

Research has shown that 65% of leather comes from cows while 15% comes from sheep, 11% from pigs and 9% from goats. Less than 0.2% of leather comes from any other type of animal.

Material is the study of structure, properties, functions and processing of leather garment & goods product material.

#### 1.1.1. Hide & skin

In the tanning trade the skins of large animals are called hides and those of small ones are generally called skins. Hides are large in size, thickness in substance and heavier in weight than skins. An intermediate class is called a kip .A kip is the hide of an immature cattle. It is smaller, lighter and thinner than hides.

For example;-hide-cattle, buffalo, crocodiles etc Skin-sheep, goat, calf skin, snakes, crocodiles, lizards and fish..etc

#### 1.1.2 Box side

These types of leather made from hide and its surface is clear smooth. It is used for leather goods products.

#### 1.1.3 Willow side

Leather was split from the inside of a cow hide and impregnated with tallow, oils and waxes. The wax and oil made the leather hard and necessitated a hot iron for shaping over the last. Its thickness is 2–4 mm thick is used by some makers. It is used for hand craft works.

#### 1.1.4 Cow dry mild

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Dry milled is process of tanned used by dry milling machine to give the leather softy felling to teach by hand. This type of leather used for garments and some ornamental leather goods products.

### 1.1.5 Goat skin

It refers to the skin of goat, which by long term usage, is denoted by the term. Tanned leather from goatskin is considered extremely durable and is commonly used to make rugs. It is often used for gloves, boots, and other products that require a soft hide. Kid gloves, popular in Victorian times are still made today. It has been a major material for leather book binding or centuries, and the oldest European binding, that of the British library in red goatskin. Goatskin is used for a traditional Spanish container for wine bag (or called goatskin). Traditional kefir was made in bags from goatskin.

### 1.1.6 Suede leather

This is a type of leather with a napped finish, commonly used for jackets, shoes, shirts, purses, furniture and other items. Suede leather is made from the underside of the skin, primarily lump, although goat, pig, calf and deer are commonly used. Splits from thick hides of cow and deer are also suede, but, due to the fiber content, have a shaggy nap. Because suede does not include the tough exterior skin layer, suede is less durable but softer than standard ("full-grain") leather. Its softness, thinness, and pliability make it suitable for clothing and delicate uses; suede was originally used for women's gloves. Suede leather is also popular in upholstery, shoes, bags, and other accessories, and as a lining for other leather products. Due to its textured nature and open pores, suede may become dirty and absorb liquids quickly.

<b>Self-Check 1</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Explain about leather? (2 points)

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2. What are the identified leather used in leather Garment & Goods production?  
(3 points)
3. Describe about suede leather. (2 points)
4. What is the characteristic of suede leather? (5points)

**Note: Satisfactory rating - 15 points**

**Unsatisfactory - below 15 points**

You can ask you teacher for the copy of the correct answers.

### Answer Sheet

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Short Answer Questions

1. \_\_\_\_\_



## Information Sheet-2 Sources and types of leather

### 1.2 Sources and types of leather

#### 1.2.1 Source of leather

Hides and skins of the domesticated animals such as cattle, goat and sheep are main resources of raw material for conversion into various types of leather. The above types of hides and skins can be obtained regularly in commercial quantities and the supply is more or less in elastic. As meat is the daily food requirement in all part of the world, hides and skins become available as a product of the meat industry and it has become necessity to procure, preserve and utilize them properly from social and economic angles and to avoid public health and pollution problems. There are also other sources for hides and skins and pig are used in many countries, skins of deer kangaroo and that of aquatic animals like seal are used where the resources are available. Only variety of bird skins used is that of ostrich and it is fashion leather other exotic types of skins are that of snakes crocodiles, lizards and fish like shark salmon and wild animals like elephant, hippo tiger, zebra and skins with fur are highly valued.

#### 1.2.2 Types of leather

There are different types of leather as mentioned below depend up on the different analysis.

##### **Types of leather According to function;-**

##### **a. leathers for Furniture and upholstery**

These leathers are almost exclusively manufactured from entire large area hides. while upholstery leathers as covers for plastic foam are manufactured very soft and also elastic, furniture leathers for covering arm chairs, and three-piece suites are same what firmer.





### **b. leathers for Garment, glove and hat**

Leathers of this category are manufactured from almost all types of raw stock, but mostly from sheep, lamb, goats and kid skins, followed by cattle and horse grain splits, calf skins, pig skins and skins of red deer.

### **c. leather for bags and saddlers**

The leather of this group has to meet the most unique requirements as they are used for different purpose. Fancy leathers are used for briefcases, camera cases, bags, or hand bags, large cases or knapsacks, the more hard wearing leathers are used for riding saddles, harnesses, stable halters or car firm leathers.

### **d. Fancy and fine leathers**

The leather of this group are manufactured mainly from small animal skins and calf skins, to a lesser extent also from cattle hides ,often from the thinner flanks ,from pig skins and a wide range of wiled skins and exotic skins . The leather is especially interesting for fashionable leathers because of their special grain patterns.

#### **Types of leather According to finishing**

1. Full Grain or Top Grain Leather – ( " the best")
2. Corrected or Embossed Grain – ( " 2nd best", full grain)
3. Split Suede – ("functional and inexpensive leather hides")
4. Nubuck Suede Grain – ("look but don't touch – very sensitive leather")
5. Reconstituted, Bonded or Fibre Leather – ( "Recycled, particle board" )

<b>Self-Check 2</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the types of leather according to function? (5 points)
2. What are the list types of leather according to finishing? (5 points)
3. What are the sources of leather? (5 points)
4. \_\_\_\_\_is the product of meat (1 point)
5. Which sources of leather used for garments & gloves product? (1point)
6. The main material of leather garment and goods production is \_\_\_\_\_(1 point)
7. What are the sources of hides? (1 point)
8. What are the sources of skins? (1 point)

**Note: Satisfactory rating 9 point, Unsatisfactory - below 9 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

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Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Short Answer Questions

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**Information Sheet-3**

**Characteristics of leather**

### 1.3 Characteristics of leather

Leather in general has specific and unique characteristic it is natural and like material. Leather is available almost all over the world where animals can breed and



meat is eaten. Leather is the largest naturally existing flexible material. There are varies from one animal to another and from one skin to another.

**1.3.1 Surface characteristic:** Such as color, texture, grain pattern leather can be produced with a large variety of each these characteristics.

**1.3.2 Thermal conductivity:** Leather is fibrous cellular material, which contains are between the fibers. This gives it natural thermal insulating properties.

**1.3.3 Surface finish:** After the tanning process, finishing operation will make the leather look nice and ready or use. There are several ways of finished leather, which can be presented in many different colors, grains, softness etc. there are different kinds of finished leather materials.

Examples

- Aniline dyed leather
- pigmented leather
- glazed leather
- Patent leather
- buffed leather
- embossed leather

**Self-Check 3****Written Test**

**Directions:** Answer all the questions listed below. Use the Answer sheet provided  
In the next page:

1. What are the characteristics of leather? (3points)
2. What is the surface finish of leathers? (6points)
3. Describe the surface characteristic leather, thermal conductivity and surface finishing of leather. (5points)



**Note: Satisfactory rating – 10 points**

**Unsatisfactory - below 10 points**

You can ask your teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

- 1. \_\_\_\_\_  
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### 1.4 Common defects and problems of leather

**1.4.1 Animal Mortem defects:** There are 3 types of defects:

**1.4.1.1. Poor substance.** By substance is meant the thickness of the hide, toughness of the fibers and the closeness of the texture of the fibers, the better they are in their leather making properties. The thinner hides containing looser and empties fiber texture are termed as hides of poor substance.

**1.4.1.2. Mechanical damages:** These are due to barbed wire and thorn marks, rub marks, and horn marks. In a place where controlled grazing is not practiced, when the cattle graze in bushes the thorns mark scratches on hides and skins. The most important defect in category is brand mark .the extensive use of hot iron for branding cattle could be for proving owner ship or merely for ornamental purpose. Branding is also done for superstitions and religions reason and often with a belief to make the animals immune certain diseases.

#### 1.4.1.3. Damages by parasites

- a. Mange: Mange is a skin disease of which the commonest type is known as follicular or domodectic mange, and is caused by parasitic mites visible only under the microscope. This disease spreads by contact with infected animals and these mites live in the hair follicles and under the surface of the skins,
- b. Ticks: These blood sucking parasites are usually found attached to the tender parts of the skins. The thinner portions of the hide such as develop the inner parts of the thighs and under the elbow. These cause small holes marring or damage the smoothness of the grain.
- c. Lice: Lice cause scars and inflammation on the grain surface where as leaches attack the watering animals more or less on regular line around the mumps and down the bellies near the four legs .These causes small punchers and give bruised appearance to the grain.
- d. Ring worm: Ring worm is a fugal disease, which attacks the hair and its roots with circular inflammation learning shiny scars, later turning to scabies or secondary infection. The scars are visible to tanner, being shiny and circular.



- e. Fox: Fox is an infection disease forming inflamed spots usually on the under and outer tender parts of the skin. The become charge with pus. Apart from lesions, the animals rub the irritating parts causing further infections and damaged.

#### 1.4.2 Post mortem defects

Two common defects of this type are:

##### 1.4.2.1 Flaying defects

A large number of slaughtered hides and skins contain defects due to care less and in efficient use of the flaying knife cuts; holes and scores produced through faulty flaying greatly diminish the value the hide or skin. Use of improper pointed knife adds to the problem. Flaying on the floor causes move of these defects than on hoist. The other common causes for cuts are delays in that make the carcass, bad lighting and luck of skill in case of fist wherever possible will improved the quality. If the ripping line is not proper, the final shape will not be symmetrical. Production of quality leathers and ultimately affect the value of the leather it self.

##### 1.4.2.2 Miscellaneous defects

- a. Inadequate bleeding: If carcass is no bled out completely at the time of slaughter, blood remains in the vessels and capillaries of the hides and skins. If cleaning and drying are delayed ,bacteria may be develop more rapidly along the blood vessels than through the substance of the hide and skin fibers in the vicinity are destroyed and open channels, following the course of the blood vessel ,are formed though the hide and skin shows up clearly in the final stage.
- b. Flaying with blood and dung: Blood is difficult to remove wool or hair and it is liable to interfere with efficient curing. Therefore, hides and skins should not be exposed to blood on the floor of the slaughter home.
- c. Robbed or drugged grain: This damage is due to abrasion of the grain surface. Usually the result of dragging animal or carcass over rough ground,
- d. While driving the animal to slaughter, unnecessarily beating with sticks and ropes causes bruises on the meat and leads to blood extravasations in the hide and skin over the bruised area.
- e. Blister and crack: Blister denotes a condition of rottenness between the inner and outer surface of the hide which is often not detectable until the hide is

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soaked in the tannery. When hides and skins are air dried, they get blisters due to local heat and sub-sequent gelatinization of fibers. If dried hides are flint dried before folding, fibers rupture and there will be cracks due to grain rupture.

- f. Drying on the ground: This is the most traditional and simplest of curing techniques and at the same time the more undesirable. Hides and skins spread on the ground with flesh side up to dry pegs or stones used at the edges to keep the hide or skin flat out.

<b>Self-Check 4</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are common defects and problems of leather? (3points)

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2. What are the damages by parasites? (5points)
3. List down the animal mortem defects? (3points)
4. What are the miscellaneous defects? (5points)
5. Post mortem defects are \_\_\_\_\_ and \_\_\_\_\_. (2points)
6. \_\_\_\_\_ the most traditional and simples of curing techniques and at the same time the more undesirable (1point)

**Note: Satisfactory rating - 9 points**

**Unsatisfactory - below 9 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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## Short Answer Questions

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5. \_\_\_\_\_

<b>Information Sheet-5</b>	<b>Possible causes for common defects in leather</b>
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### 1.5 Possible causes for common defects in leather

**1.5.1 Breed influence:** Cattle hide and sheep skins show more undesirable breed characteristics than calf skins and goat skins. The best quality leathers even plump or stout have surface areas are small in proportion to hair weight.

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**1.5.2 Climate:** In general animals raised in warmer climates have shorter hair and the leather originating from these places have superior substance and have smoother and finer grain patterns whereas in order and higher altitude climate the animals will have longer hair or wool and leathers will be of poor substance and coarse grain. These effects are more pronounced on goat and sheep skin.

**1.5.3 Diet:** Poor nutrition causes an animal to be smaller and the skin or hides to be thinner and to have poorer substance, lack elasticity and have dead feel. How ever, they have less fat deposition in corium and have finer grain.

**1.5.4 Sex and age:** In cattle hides the male hides specially the older ones have heads and shoulders, which give problems in handling. In male sheep skins will be heavier, with coarse grain. The female skins will have better tensile strength. The skins of young animals have structures that are fine and compact and have good tight grain patterns. As animals grow older the grain surface becomes tougher and coarse gained. Also with age the animals accumulate more scars from brands, parasites, scratches and other injuries.

<b>Self-Check 5</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Cattle hides and sheep skins show more undesirable breed characteristics than \_\_\_\_\_ and \_\_\_\_\_ (2points)
2. What are the possible causes for common defects in leather? (4points)

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3. \_\_\_\_\_ causes an animal to be smaller and the skin or hides to be thinner and to have poorer substance, lack elasticity and have dead feel.  
(1point)
4. Describe the characteristics of defects in Sex and age.(3points)

**Note: Satisfactory rating - 6 points**

**Unsatisfactory - below 6 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

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<b>Information Sheet-6</b>	<b>Identifying regions of leather and their qualities</b>
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**1.6 Regions of leather and their qualities**

**1.6.1 Quality regions:** This done by the human eye and hand, it is one of the most difficult areas to train as it relies on individual or skills and concepts. There are no exact standard or methods for grading leather, since is done by the grain characteristics, sight and feel developed through experience and training.

A skin is divided in to five quality regions are shoulder, belly, butt, shank, side. From this leather parts the best part is butt. This has the tightest fiber structure. The fiber structure can vary considerably depending on the age of the animals



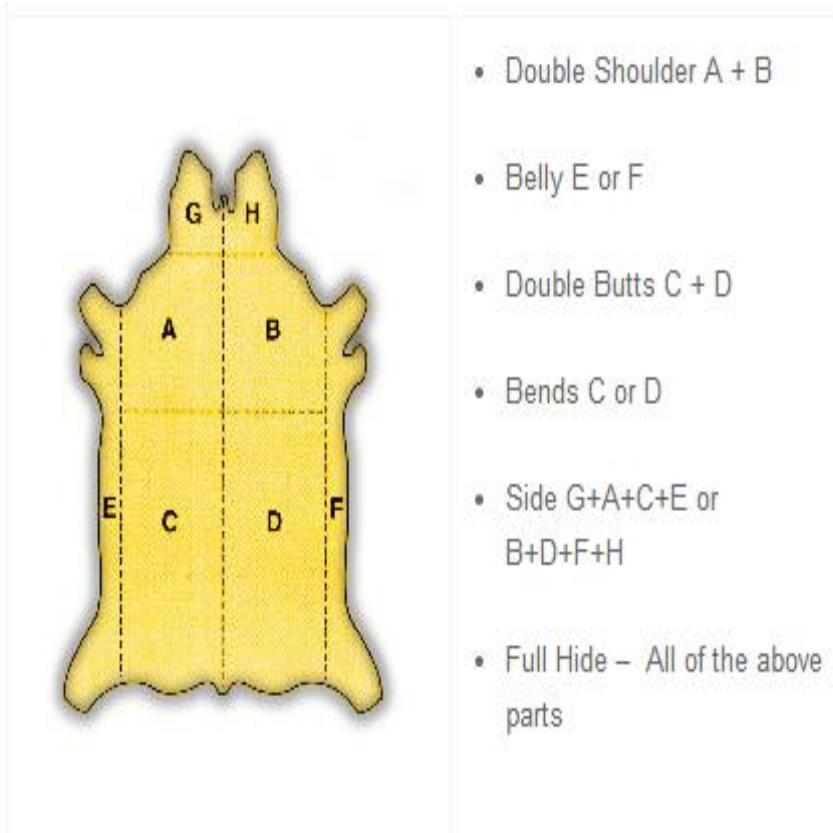
and the living conditions .The neck and the belly have the loosest fiber structure. The other parts of leather are shoulder, bend and side.

- a. Shoulder: The shoulder is a softer area of the hide. The shoulder tends to have some wrinkles from the animal's neck folds. It's used for belts, bags, gloves and less visible shoe parts like tongues, insoles, and counters (a piece of leather placed inside the back of the heel to strengthen it)
- b. Belly: The belly is a stretchy soft leather of varying thickness. The belly is a stretchy soft leather of varying thickness. The belly (as we all know) is the stretchiest part. This makes it difficult to work with, but it's often used for cheap gloves.
- c. The bend or butt; is the central part of the hide. This leather is the best quality and most durable. It's used for jackets, belts, saddles, shoe vamps (the front part of the upper, the most visible part) and outsoles
- d. Shank (leg): the hand or leg of hide or skin that mostly will be out of use. it will be used for other purpose.
- e. Side: side of the hide or skin that is on the side of butt from right and left. That is called half grain.

The face, cheek, and shanks (legs) are some of the lowest quality parts of the hide. They're rarely used.

– The rear produces poor quality leather, often used for linings. You'll remember that these are the thinnest parts of a shoe, at about 1oz thick.

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- Double Shoulder A + B
- Belly E or F
- Double Butts C + D
- Bends C or D
- Side G+A+C+E or B+D+F+H
- Full Hide – All of the above parts

**1.6.2 Quality of leather for proper work:** In the cutting operation the cutting man has to select the right quality leather, because when one deals in leather she/he will find that no two skins/hides are the same, either in texture, quality or thickness. Therefore, one has to have the necessary skill to determine what parts of the hides/ skins is most suitable for each components in the correct position to minimize waste and still assuring the correct orientation of each component as to its stretch properties.

<b>Self-Check 6</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Explain about quality of leather? (1point)

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2. \_\_\_\_\_done by the human eye and hand, it is one of the most difficult areas to train as it relies on individual or skills and concepts (1point)
3. A skin is divided in to \_\_\_\_\_ quality regions. (1point)
4. The best part of the quality region is \_\_\_\_\_.(1point)
5. List down the five quality regions of leather (5points)

**Note: Satisfactory rating - 5 points**

**Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

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<b>Information Sheet-7</b>	<b>Using types of surface finishes on leather</b>
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### **1.7 Types of surface finishes used in leather**

Many types of leather of this group have to meet the most required requirements with regard to their physical properties in industry most of the belt drives have been replaced by shift transmissions.

#### **1. Full Grain or Top Grain Leather – ( " the best")**

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This is the upper layer of a hide which is split into layers by a splitting machine to various thicknesses. This outer layer will show natural scars and hair cell patterns if left as uncorrected natural grain. The thickness can vary depending on the gauge set at the time of splitting and the application. Thereafter the hides can be colored & given various protective finishes. Whether produced for Upholstery, Garment, Shoe or Saddler, these are the best types of leather as they are the strongest and most durable and valuable layer of hide.

## **2. Corrected or Embossed Grain – ( " 2nd best", full grain)**

Hides which have an excessive amount of scratches or scars are further processed by "correcting" the natural grain of a Full Grain skin. After splitting to the required thickness, this natural grain is buffed or sanded and replaced with an embossed grain and finish to simulate various hair cell patterns. The resulting effect will look flawless with no natural scars showing, but this is no longer the real or natural grain. The original feel or hand of the natural skin and durability is also reduced with a synthetic grain and finish. Many applications for shoe and handbag leather are embossed with unique exotic prints to simulate the look as well. This process is utilized in many Garments and Upholstery while still represented as "full grain leather" which technically it is that layer.

## **3. Split Suede – ("functional and inexpensive leather hides")**

The second layer or lower layer of the skin left after removing the Full Grain layer is the Split Suede and will be suede on both sides. These types of leathers also will come in various thicknesses depending on application. As this is a byproduct of hide tanning it is less costly and therefore utilized in products where Full Grain is not required such as tool pouches, moccasins, suede garments etc.. This layer of the skin can also be further processed by the application of a synthetic finish and hair cell to one side of the suede to create an artificial look of Full Grain leather, known as "finished split" hide. This is used extensively in lower cost furniture and garments and represented as "Genuine Leather" which technically it still is although it may look like something it is not.

## **4. Nubuck Suede Grain – ("look but don't touch – very sensitive leather")**

This Full Grain layer of the skin is given a suede effect by lightly sanding the natural grain to open the hair cell and results in a velvety suede feel. This is also correcting imperfections in the natural grain and although soft to the touch, it is a sensitive

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effect. Care must be taken against soiling or staining as it is very difficult if not impossible to clean afterward. This effect is utilized in many garments and Upholstery products.

### 5. Reconstituted, Bonded or Fibre Leather – ( “Recycled, particle board” )

Here leather remnants and scraps from garment and shoe factories are ground up and recycled. In these types of leather the fiber particles are bonded with adhesive into a fabric followed by the application of a synthetic grain, hair-cell pattern and finish. This material will have a suede back and looks of smooth Full Grain leather , while it is essentially Particle board leather. As it is comprised of at least 51% leather fiber, it is represented as “Genuine leather” and utilized in many low priced garment and upholstery finished products.

<b>Self-Check 7</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the types of surface finishes used in leather? (4 points)
2. Describe about full grain leather or top-grain leather. (4 points)
3. Describe about split suede leather? (4 points)
4. Describe about corrected grain leather? (4 points)



5. \_\_\_\_\_ is any leather that has had an artificial grain applied to its surface.
6. \_\_\_\_\_ is the second highest quality its had the split layer separated away, making it thinner and more pliable when full grain.
7. \_\_\_\_\_ Created from the fibrous part of the hide left once the top grain of the raw hide has been separated from the hide.

**Note: Satisfactory rating - 6 points**

**Unsatisfactory - below 6 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



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2.

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3.

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4.

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5.



## Instruction Sheet

## LG16: Identify different types of accessories

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Identify Accessories used in leather garment & goods production
- Identify Types of source of accessories
- Identify Characteristics of accessories
- Identify Common problems of accessories

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Identify different types of accessories used in leather garments and goods production
- Identify Characteristics and common problems of accessories

### Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 14
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask your teacher for assistance if you have a hard time understanding them.
4. Accomplish the “Self-check 1” in page 17.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Instruction #2.

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7. Submit your accomplished Self-check. This will form part of your training portfolio.

8. Read the information written in the “Information Sheet 2”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.

9. Accomplish the “Self-check 2” in page 20.

10. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 2).

11. Read the information written in the “Information Sheets 3 and 4”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.

12. Accomplish the “Self-check 3” in page 23.

13. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 3).

14. Accomplish the “Self-check 4” in page 26.

15. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 4). If your rating is unsatisfactory, go back to instruction # 11. However, if your rating is satisfactory you can proceed to Learning Guide # 3





## Information Sheet-1

# Using accessories in leather garments and goods production

## Accessories used in leather Garment & Goods production

Accessories play a vital role in the manufacturing of leather garment and goods because they are used for various to open and close, to provide strength and durability, to hold, to join to stitching to improve elegance and beauty etc.

### 1. Lining

Linings are used as reinforcement materials in a wide variety of leather goods and leather garments. Lining is done usually with fabrics, leathers and synthetics.

#### The uses of linings in leather garment and goods are:

- To mask the rough surface of split leather components,
- To cover the defects of flesh side of the leather components,
- To add aesthetic value to internal part of the leather garment and goods
- To add sufficient strength to the components,

#### Types of lining

##### Fabric Linings

Cotton and silk are generally used as linings in leather garment and goods. Drill and casement linings are used as linings in heavy and luggage leather goods. Taffeta Linings are used in sophisticated leather goods like brief cases, attaché cases, jewel boxes, camera cases etc. Split linings are used in heavy and luggage goods. Skiver linings are used in small leather goods.

##### Leather Linings

Some leather goods are lined with lining leather made out of sheep, goat, pig leather is most durable lining material but is heavy and bulky in comparison with fabric and to its relatively higher price. Suede's split and skivers are used as linings in leather goods making. These linings give more strength, durability and enriches the look of the products.



## **Synthetic Linings**

Synthetic lining materials have advantages of washability and lower price over leather lining and has advantages of leather look over fabric lining .They are also easier for cutting.

## **2. Reinforcement**

Reinforcements are the materials that are introduced in the leather products to add substance, strength and shape. They are introduced in the articles in between the leather and lining materials. Reinforcements play a vital role in modern leather goods and garments without which many of the designs would not be possible and most of the leather products would have to be soft and shapeless. In molded, built-up and box work constructions, reinforcement materials are generally used. Some of the reinforcement materials which are commonly

### **a. Cell carton / Drawing / Cartridge/ Papers**

Cartridge papers or white drawing papers are used for pattern making process. It is also used as a lining reinforcement.

### **b. Millboards**

Millboards are used in a variety of works in leather goods making, in particular, for making patterns for the products. It has a smooth surface on one side and coarse surface on the other side. The smooth side provides uniform smooth surface to the leather components during assembling while the coarse side provides firm grip to the reinforcements. Mill boards are used as a reinforcement material in making molded type of articles like, jewel box, penholder tumbler, pincushion, desk pad, letter paper and envelope case, visiting card case, etc. and also in heavy leather goods like document case, briefcase, suitcase etc.

### **c. Straw boards**

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Yellow straw boards are used as reinforcement material in making molded type of articles namely desk pad, pen and pencil tray, penholder, pin cushion, photo frame, etc.

#### **d. Iron bar**

Iron bar frames are used as reinforcement material in heavy/luggage goods. They not only help to provide sufficient strength to the fittings but also prevent deformity of the products due to impact. Iron frames/bars are used in document cases, medical representative bags, sports kit bags, suitcases, etc.

#### **e. Foam rubber sheets**

Polyurethane foam rubber sheets are used in a variety of leather goods where cushioning of the products is necessary. 2m x 1m x 3mm and 2m x 1m x 6mm foam rubber sheets are normally used in leather goods making.

### **3. Wadding material**

Wadding is the filling placed between two pieces of fabric to form the quilt which are commonly processed by bonding or needle punch. It consists of loose poly fill synthetic fibers that are used for in filling /stuffing or inter lining home furnishing items. There are different types of wadding and in natural it is black and white:

- a. Breeding is what can happen on cheap wadding. The fibers tend to separate and push through the top layer making your quilt or project misshapen or un comfortable to wear or use.
- b. Loft wadding is available in different weight and thickness which is called the loft. A low loft means it's thin and a high loft thick.
- c. Cotton wadding falls into the loft category. Although they feel thin this is deceiving once quilted. Most good quality cottons have been bonded which means they have had very light application of adhesive added to each side of the wadding which holds the cotton fibers together so they won't shift or bread. Quilts made with cotton wadding can be used throughout the year, because cotton does not hold heat so you will feel cooler in the summer, but it is also absorbs and traps air. This cushion of air will keep you worm on a cold winters night.

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d. Polyester wadding is lighter than cotton but it will also keep you warm without the weight. The polyester fibers are stronger and more stable and can withstand repeated washings.

#### **4. Fusing.**

Non-woven fabric is a fabric-like material made from long fibers, bonded together by chemical, mechanical, heat or solvent treatment. The term is used in the textile or leather products manufacturing industry to denote fabrics such as felt, which are neither woven nor knitted. Non-woven typically lack strength unless densified or reinforced by a backing. In recent years non-woven have become an alternative to polyurethane foam.

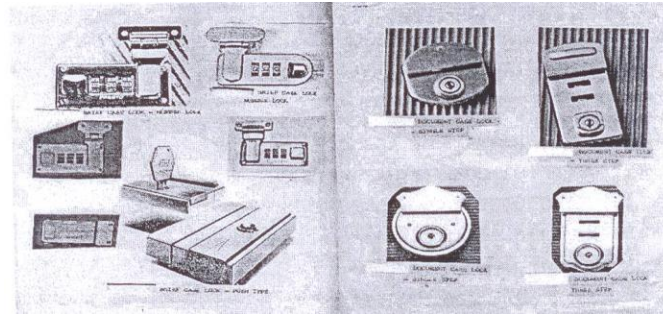
#### **5. Fittings**

Fittings can be manufactured from metals and metal wires coated with brass or chromium or anodized in matt or high glossy or antique finish. Imported and superior quality fittings are used in leather goods and garments which are sold in external markets while ordinary metal fittings plated with brass or chromium or anodized are used in leather goods which are sold in internal markets. Fittings comprise of locks, Frames, strap fittings, gusset fittings, handle fittings, hooks, hinges, clips and fasteners. Hence fittings are different in size, shape, strength and materials it doesn't necessary to put the same parameter with sewing thread, so parameters that are going to set for fitting are size, shape and strength.

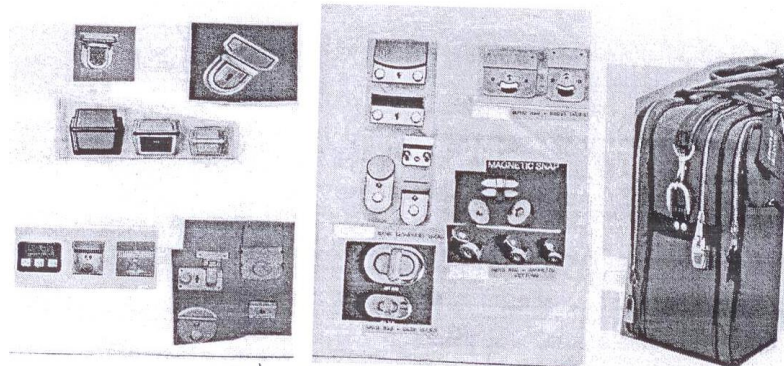
##### **i. Locks**

Locks are manufactured in different sizes, shapes and styles and are used as closing device in leather goods. Locks may or may not have locking arrangements. They are generally used in heavy luggage and molded leather goods. E.g. suitcase locks, Brief case locks, document case locks, camera case locks, fancy locks (for exclusive leather goods like jewel box, cosmetic box, etc.), zip locks, magnetic snaps, clip locks, etc.

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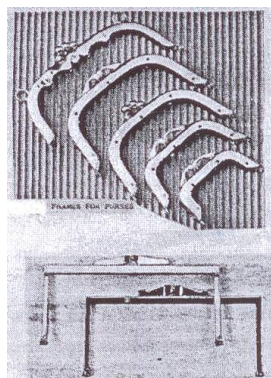
**Fig. Suit case, brief case and document case locks**



**Fig. Camera case locks, fancy locks, zipper locks, magnetic snaps and clip locks**

## ii. Frames

Ladies handbag frames are manufactured in different shapes, sizes and styles. Smaller frames of sizes 8cms to 15cms are used for making framed purses and pouches while bigger frames of sizes 18cms to 30cms are used for making framed handbags. Handbag frame is made of: rods—for gusset fittings, bats—for joining the rods, rams and rings—for handle fixing and closing can be a valve type or snuff box type or friction type



**Fig. hand frame**

## iii. Strap fittings



It contains rings, belt buckles, roller buckles, adjustable buckles and Watchstrap buckles:

#### **(a) Rings**

Rings are manufactured in different sizes and shapes and are used for fixing handles and shoulder straps.

#### **(b) Belt buckles**

Belts are an essential accessory to any wardrobe. Belt buckles should be sleek. Belt buckles are manufactured in different sizes and shapes and are used in making belts.

25mm, 30mm and 35mm buckles are used in gents' belts. 50mm and 70mm buckles are used in police, army, pouch and fancy ladies belts.

#### **(c) Roller buckles**

Roller buckles are manufactured with metallic sleeve and hook. The sleeve of the buckle permits the leather strap to slide over it easily and facilitates the buckle hook to engage into the hole of the leather strap. They are used as a closing device in bags. Roller buckles are largely used in document cases, school bags, conductor bags, etc.

#### **(d) Adjustable buckles**

Adjustable buckles are manufactured in different sizes, shapes and styles. They are used in ladies and gents' shoulder bags. The length of the shoulder straps can be adjusted by using these buckles.

#### **(e) Watchstrap buckles**

Watchstrap buckles are manufactured in different sizes and shapes. 9mm, 10 mm and 12 mm watchstrap buckles are used in ladies watchstraps while 14mm, 16mm and 18 mm

Watchstrap buckles are used in gents' watchstraps

#### **iv. Gusset fittings**

Gusset fittings are manufactured in different shapes and sizes. These fittings facilitate to hold the strap of the bags. They are extensively used in exclusive shoulder bags.

#### **v. Handle Fittings**

##### **(a) D-Plates**

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D-plate has a centre groove in which D-ring is fixed. Hence it is called D-Plate. D-Plates are manufactured in different sizes. They are used in fixing handles in heavy and luggage goods. 'D' Plates are also used in dog collars.

### **(b) Handles**

Leather handles and plastic handles of different sizes and shapes are used in heavy luggage and molded goods.

## **vi. Hooks**

### **a) Key Hooks**

Key Hooks are manufactured in different styles and sizes with 4 and 6 hooks. These are used in key cases. Matt and glossy finished brass key hooks are used in exportable key cases while ordinary chromium and anodized key hooks are used in key cases, sold in local markets.

### **b) Dog Hooks**

Dog hooks are manufactured in different sizes and shapes. Sophisticated metallic dog hooks are used as detachable shoulder strap hooks in exclusive gents and ladies shoulder bags and in travel suitcases. Ordinary dog hooks are used in dog collars.

## **vii. Hinges**

Metallic hinges are manufactured in different shapes and sizes and are used in travel suitcases, brief cases, cosmetic boxes, jewel boxes etc.

## **viii. Clips**

Metallic corner clips are used as decorative fittings. They are manufactured in different sizes, styles and shapes. They are used in document cases, folders, wallets, passport covers, etc. In billfolds, spring type clips are used to hold currencies.

## **6 Fasteners**

A fastener is a [hardware](#) device that mechanically joins or affixes two or more objects together. Fasteners can also be used to close a container such as a bag, a box, or an

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envelope; or they may involve keeping together the sides of an opening of flexible material, attaching a [lid](#) to a container.

### **a) Rivets**

Rivets are manufactured in two types. They are bifurcated rivets and lock rivets. The rivet has a cap and a split stem. Bifurcated rivets are used for fixing handles in leather goods where considerable strength is necessary while lock rivets are used for fixing locks.

### **b) Rivet Buttons**

Rivet buttons are used as fastener in a variety of leather goods. A rivet button has two parts. The upper part is a hollow cap and the bottom part is a cylindrical stem with base. While joining components, the bottom stem is pushed through the punched hole and the cap is pressed over it. The riveting is done by riveting tool. Black, brown, and other color rivet buttons are used to match the color of the products.

### **c) Eyelets**

Eyelets are manufactured in different shapes and sizes. Small eyelets are used in key cases, belts, leather straps, etc. while big and fancy eyelets are used in stretch ladies handbags.

### **d) Studs**

Metal and plastic studs are manufactured in a variety of shapes and styles, viz. cylindrical, conical, half-moon etc. and are used in box type of leather goods. They prevent the products from abrasion due to keeping them frequently on floor. Studs are used in brief cases, suitcases, jewel boxes, cosmetic boxes, etc.

### **e) Purse Buttons**

Purse buttons otherwise called snaps are used in leather goods. A purse button has four parts. They are cap, cap spring rivet, snap and snap rivet. These parts are fitted into leather goods by an appropriate button-fitting tool . Purse buttons are used as a closing devise in pockets. Purse buttons are also used in gent's belts to hold the

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buckle. In Shoulder bags, purse buttons are used for making suitable adjustments in the length of the strap.

## f) Zips

Primarily there are 3 main categories of Zippers

- i. **Polyester Zippers:** CFC, CH, LFC and Invisible Polyester Zippers are mainly of 4 Types;
  - **CFC** Coil Filler Cord type, available in #2, 3, 4, 5,6,7,8,9,10 & 12
  - **CH** Coil without Cord type, available in only #3 (sometime also referred to as # 2)
  - **LFC** Ladder Type Coil, available mainly in # 3 and # 4, used a lot for trouser application
  - **Invisible** Concealed Coil, a wonderful zipper available in # 3 and # 4, used for ladies garments
- ii. **Molded Zippers:** Plastic Injection Molded
- iii. **Metal Zippers:** Brass, Aluminum, Bronze or Nickel Silver Zip Fastener Sliders used in all types of Zippers are mainly made of Zinc Alloy, however few Sliders are made of Brass or Plastic also, but most Sliders are of Zinc Alloy only.

## Uses of zippers

**Garments – Ladies’ & Children’s Dresses** - CFC, CH or Invisible mostly Closed end Zippers are commonly used.

**Garments - Jackets & Overcoats** - Metal or Molded Open End or Two Way separating Zippers are commonly used.

**Garments - Trousers** - # 3 LFC with Pin Lock or # 3 CFC with Auto Lock - Closed End Zippers.

## Some Zipper Fact

- Plastic Zippers are less likely to break, than metal Zippers.
- Plastic Zippers are easier to zip up and require less maintenance
- Polyester Coil Zippers are much stronger than solid looking plastic molded toothed Zippers.
- Larger Zippers are not necessarily stronger.

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- Dirt in a CFC Zipper or Zipper Slider will quickly damage it, keeping a Zipper clean will extend its life.

## 7 Adhesives

An adhesive, or glue, is a mixture in a liquid or semi-liquid state that adheres or bonds items together. Adhesives may come from either natural or synthetic sources. The types of materials that can be bonded are vast but they are especially useful for bonding thin materials. Adhesives are advantageous for joining thin or dissimilar materials, example in manufacturing of leather goods, but it is good to use adhesive tapes for leather garments. A disadvantage to adhesives is that they do not form an instantaneous joint, unlike most other joining processes.

There are basically two types of glue:

1. The fast-adhesion glue (synthetic based)
2. The water soluble glue or latex

Water soluble glue is useful for parts which do not need to be stitched or for spreading on reinforcements. Paper can be glued well with this type of glue. This type of glue has much better adhesive qualities than synthetic based glue. Almost all types of adhesive are the same in their application, and also the same in their ingredients but they may differ in their, viscosity, heat and aging resistance, volatilization time and conglutination. Some adhesive properties and applications are discussed below.

### Adhesive for Leather Case

- Main Ingredients: Synthetic rubber, savage resin
- Viscosity cp. S: 80+-10
- Heat & Aging Resistance: Good
- Volatilization Time (s): 30-60s
- Opening Time (minute): 6-8min
- Best Time for Conglutination: 1-3min

### Spray Adhesive for Suitcase

- Main Ingredients: Synthetic rubber, savage resin
- Viscosity cp. S: 110+-10
- Heat & Aging Resistance: Good

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- Volatilization Time (s): 30-60s
- Opening Time (minute): 8-10min
- Best Time for Conglutination: 1-3min

#### **Adhesive Glue for Fabric Bag**

- Main Ingredients: Synthetic rubber, savage resin
- Viscosity cp. S: 80+-10
- Heat & Aging Resistance: Excellent
- Volatilization Time (s): 60-90s
- Opening Time (minute): 30min
- Best Time for Conglutination: 5-10min

Applicable Material: Conglutination between clothes, leather, foams, cardboards, boards, etc.

#### **Spray Adhesive for Bag Making**

- Main Ingredients: Synthetic rubber, savage resin
- Viscosity cp. S: 70+-10
- Heat & Aging Resistance: Good
- Volatilization Time (s): 30-60s
- Opening Time (minute): 8-10min
- Best Time for Conglutination: 1-3min

#### **Leather Glue**

- Main Ingredients: Synthetic rubber, savage resin
- Viscosity cp. S: 70+-10
- Heat & Aging Resistance: Excellent
- Volatilization Time (s): 30-60s
- Opening Time (minute): 8-10min
- Best Time for Conglutination: 1-3min

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- Applicable Material: Conglutination between clothes, leather, foams, cardboards, boards, etc.

## 8 Threads

A thread is defined as a large number of very thin fibers spun together, used in the manufacture of leather goods sewing.

### Types of thread:

**Cotton:** Cotton sewing thread is the traditional choice. Cotton is a natural thread that gives a soft, matte look; cotton thread is available in a wide range of weight and is suitable for most sewing projects. Cotton thread does not stretch a great deal, and will break if pulled too tightly. Cotton threads will fade with the sun. Long staple cotton is finer and stronger than regular cotton. Most high quality threads are made with long staple cotton giving a softer, stronger and higher luster thread suitable for leather goods.

### Properties of cotton thread:

- Good heat resistance
- Low elongation
- Low strength per size
- Colorfastness not as good as synthetic

**Nylon:** Nylon is a thermoplastic (softens and flows on repeated heating and hardens when cooled) polymer.

- It has a melting point of 536k
- It has greater tensile strength
- It absorbs very little water

**N.B:** Nylon is very strong, it is used in many applications where high strength.

**Polyester:** Polyester is the most popular thread for general sewing. It is a very strong economical thread. Polyester thread won't fade or shrink if washed. Polyester thread falls between that of cotton and rayon. It is a medium luster thread, suitable for almost any sewing.

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## Properties of the Polyester Thread

- Polyester thread has superior resistance to sunlight (UV), mildew, and abrasion.
- Polyester thread is strong, colorfast, and durable in laundry and wearing, practically NON-shrinking and can be purchased in huge variety of colors.
- Some of polyester thread are less shiny than rayon's,
- It does not stretch and pull as much as natural thread, polyester-based thread tends to be easier to use in a sewing machine and generally requires less precise sewing machine adjustment than cotton threads.
- Polyester thread won't fade or shrink in the wash.

**Thread size:** All threads can be produced in different thickness and the "size" of a particular thread is the relationship of its length to its weight. This relationship of length to weight is known as linear density. There are many sizing systems used but they generally fall into two classifications.

**Fixed weight:** These systems use the length of yarn that makes up a given weight. e.g. If you had a single stand of yarn 840 yards long weight one pound.

**Fixed length:** These systems use the weight of a given length. e.g. 1 Tex = 1 gram per 1,000 meters.

<b>Self check-1</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

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1. Write the types of accessories used for leather garment and goods production at list five (5points)
2. We use commonly for sewing the three types of treads are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_(3points)
3. \_\_\_\_\_, or \_\_\_\_\_, is a mixture in a liquid or semi-liquid state that adheres or bonds items together. (2Points)
4. Fasteners can also be used to close a container such as a bag, a box, or an envelope; or they may involve keeping together the sides of an opening of flexible material, attaching .What are they? (5points)
5. \_\_\_\_\_ is the filling placed between two pieces of fabric to form the quit which are commonly processed by bonding or needle punch (1point)
6. Linings are used as reinforcement materials in a wide variety of leather goods and leather garments. Lining is done usually with \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ (3points)
7. The sources of leather lining are \_\_\_\_\_ and \_\_\_\_\_(1point)

**Note: Satisfactory rating - 10 points**

**Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

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Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Short Answer Questions

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_
4. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

<b>Information Sheet-2</b>	<b>Identification of types and sources of accessories</b>
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### Identify Types and Source of Accessories

Accessories can be made from different materials such as metal (copper), Plastic and other materials. From these materials we can produce bracelets, cuffs, necklaces, barrettes; embossed/deposed labels, stamping, foiling; tabs, zipper pulls, knotted/covered buttons; collars, leads, harnesses; pillows, throws, shams; high end corporate gifts; and architectural designs etc.



Almost all types of leather goods require some or other types of metal fittings. For Example, suitcases require locks, stoppers and handle. Waist belt requires buckles. The demand for these items is increasing with the growth in the leather goods making Industry. Customer demand for the leather goods is growing in the country. Increasing in purchasing power and change fashion will increase the demand still further. In addition, demand for Ethiopian leather goods in export market has gone up considerably in recent year. This aspect is relevant for garment industry. Due to these factors, there is sufficient scope for new units to develop in the production of metal fittings which are currently imported.

<b>Self-Check 2</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Accessories made from \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ materials. (3pts.)
2. What are Accessories that can be made from different materials? (3pts.)





**Note: Satisfactory rating - 4 points                      Unsatisfactory - below 4points**  
You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_



- 
- 
- 
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

<b>Information Sheet-3</b>	<b>Characteristics of Accessories</b>
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### **Identify Characteristics of Accessories**

The characteristics of accessories are different in their product material and their usage. Examples:

#### **Linings**

- Fabric lining: it is woven, different in thickness, different usage and made from different material i.e. cotton ,nylon
- Leather lining: it is stretch, it is heavy to hold, more durable and more costs.
- Synthetic lining: it is stretch, it is light and it made from synthetic material.

#### **Reinforcements**

Reinforcements are the materials that are introduced in the leather products to add substance, strength and shape. They are introduced in the articles in between the

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leather and lining materials. Reinforcement materials which are commonly Cell carton, PU foam, Wadding, fusing, and grey boards

### **Fitting**

Fittings can be manufactured from metals and metal wires coated with brass or chromium or anodize in matt or high glossy or antique finish. Imported and superior quality fittings are used in leather goods and garment.

### **Fasteners**

A fastener is a [hardware](#) device that mechanically joins or affixes two or more objects together. Fasteners can also be used to close a container such as a bag, a box, or an envelope; or they may involve keeping together the sides of an opening of flexible material, attaching a [lid](#) to a container.

### **Adhesive**

Its characteristic is deepened on its all types of adhesive are the same in their application, and also the same in their ingredients but they may differ in their, viscosity, heat and aging resistance, volatilization time and conglutination.

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<b>Self-Check 3</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Define the characteristics of synthetic lining. (3 points)
2. Write the names of commonly used reinforcement materials. (3 points)
3. Explain about adhesive properties? (3 points)



**Note: Satisfactory rating - 6 points    Unsatisfactory - below 6 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Information Sheet-4**

**Identify common problems of accessories**



### **Identify Common problems of Accessories**

Accessories have different types of property. Information gathered on wholesale and retail prices of the described categories of buckles and the fasteners described above, has revealed that there are no uniform prices for any of the products as there are differences in the type and quality of the metal from which the fittings are made. There are fittings in the market made from chrome-plated, zinc-plated or plain steel and also some made from tin alloys.

Accessories being considered are inputs in the leather products industry. The majority of these factories is mostly small scale and privately owned. Furthermore, the type and quality of fittings they require vary from time to time; since they also have to address the quality requirement desired by their customers. Since bulk sales to any one of these is unlikely, distribution through wholesalers is recommended. It is assumed that a local manufacturer will satisfy at least 60% of the demand for all types of metal fittings for leather products; and be prepared to meet the challenges of competition from imported products both in terms of quality and selling price.

<b>Self-Check 4</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the common problems of accessories? (5pts.)
2. The type and \_\_\_\_\_ of fittings they require vary from time to time. (5pts.)
3. The demand for all types of \_\_\_\_\_ fittings for leather products. (5pts.)
4. \_\_\_\_\_ being considered are inputs in the leather products industry. (5pts.)

**Note: Satisfactory rating - 20 points**

**Unsatisfactory - below 20 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

<b>Instruction Sheet</b>	<b>LG17: Determine uses and performance of leather and accessories</b>
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Identifying use of leather and accessories
- Identifying handling and care requirements of leather and accessories
- Identifying performance of leather and accessories
- Identifying physical properties of leather and accessories
- Using OHS practices relevant to material uses

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Identify Use of leather and accessories for leather garments and goods production
- Identify Performance of leather and accessories for leather garments and goods production is identified
- Perform Handling and care requirements of leather and accessories

### **Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 13
3. Read the information written in the “Information Sheets 1&2”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1&2” in page 6
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 1&2).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 1&2”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Instruction #3.

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7. Submit your accomplished Self-check. This will form part of your training portfolio.
8. Read the information written in the “Information Sheet 3&4”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
9. Accomplish the “Self-check 3&4” in page 10
10. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 3&4).
11. Read the information written in the “Information Sheets 3 and 4”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
12. Accomplish the “Self-check 5” in page 14.
13. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 5). If your rating is unsatisfactory, go back to instruction # 11. However, if your rating is satisfactory, that will be the successful completion of the competency.

<b>Information Sheet-1</b>	<b>Identifying use of leather and accessories</b>
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There are different types of leathers used for leather garment and goods product. Such as sheep Napa, suede, cow softy, and other proper type of material used for garment product. So for leather goods also, full grain upholstery glazed leather Patent leather embossed leather cow softy used for leather goods products.

Accessories play a vital role in the manufacturing of leather garment and goods because they are used for various to open and close, to provide strength and durability, to hold, to join to stitching to improve elegance and beauty etc.

Such accessories are Lining, Reinforcement, Wadding material, Fusing materials, Fittings, fasteners, adhesives and Threads used to garment and goods products.

<b>Information Sheet-2</b>	<b>Identifying handling and care requirements of leather and accessories</b>
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### (1) Care and Handling of Leather

Leather is a versatile, durable and prestigious material, with a wide range of desirable attributes - such as flexibility, strength, mould ability, breathability, friction resistance and with the possibility of being prepared in a way to be resistant to heat and water. Leather will retain its appearance and its functional properties if it is correctly handled and maintained. The correct method of care and handling will depend on the type of leather it is.

(2)

### (3) Care and Handling of accessories

Accessories collections contain a wide range of organic materials, including metal, plastic, animal leather, and chemicals. Such organic substances undergo a continual and navigable natural ageing process. While measures can be taken to slow this deterioration by careful handling and providing a sympathetic environment, it is impossible to halt it altogether. The chemical and physical stability of accessories material also depends on the quality and processing of the raw products used in their manufacture together with the design and construction of the final artifact.

Over the centuries, the pressures of mass production have reduced the material quality of what is received in stores. Reaching the end of its natural life, and the few years that it has left can only be prolonged by careful handling and storage.

<b>Self-Check 1&amp;2</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

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1. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ are types of leathers are used for leather garment product. /3points/
2. \_\_\_\_\_are play a vital role in the manufacturing of leather garment and goods products. /1point/
3. Full grain upholstery glazed leather patent leather embossed leather cow softy used for \_\_\_\_\_ products. /1point/
4. What are the main threats to handle material? / 4points/
5. Accessories collections contain a wide range of organic materials, including \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ /4 points/
6. Write at list 7 use of accessories./7 points/

**Note: Satisfactory rating – 20 points                      Unsatisfactory - below 20 points**

You can ask you teacher for the copy of the correct answers.

<b>Answer Sheet</b>		Score = _____
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Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Short Answer Questions

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

<b>Information Sheet-3</b>	<b>Identifying performance of leather and accessories</b>
----------------------------	---



In production of leather garment and goods the behavior of leather varies with in the product. Such as sheep Napa, goat suede and cow Napa in the same thickness and softness are used for garment. Full grain, corrected grain, goat upper. And vegetable tanned leather used for goods .The thickness and appearances of leather determine by the type of product.

Accessories vary with the variation of the product. Examples;

**Garments - Ladies & Children's Dresses** - Invisible mostly Closed end Zippers [concealed]

**Garments - Jackets & Overcoats** - Metal or Molded Open End or Two Way separating Zippers

**Garments - Trousers** - # 3 LFC with Pin Lock or # 3 CFC with Auto Lock - Closed End Zippers.

Metal and plastic studs are manufactured in a variety of shapes and styles, viz. cylindrical, conical, half-moon etc. and are used in box type of leather goods. They prevent the products from abrasion due to keeping them frequently on floor. Studs are used in brief cases, suitcases, jewel boxes, cosmetic boxes, etc.

**Information Sheet-4**

**Physical properties of leather and accessories**

### **Strength properties**

The objective of this test is to ascertain whether the leather and accessories used in the leather garment and goods are weak or have variable stretch and broken or bend



properties .In both these cases, the leather may crack under the effect of pressure and flexing under conditions. Tensile strength Testing Machines provide a relatively inexpensive way for determining the tensile strength and elongation of a variety of raw materials such as rubber, leather, fabric, plastics, belts, wires, etceteras.

### **Surface characteristics of leather**

Leather is fibrous cellular material, which contains air between the fibers is the characteristics of thermal conductivity After the tanning process, finishing operations will make the leather look nice and ready or used in many different colors, grains; softness etc is the characteristics of surface finishes. Such things as color, grain pattern leather can be produced with a large variety of each characteristic. Tensile Strength and elongation are the two prime characteristics of most of the raw materials, whether they are metals; or non metals such as rubber, leather, textiles, plastic, paper; or finished products such as rods, wires, ropes, yarns, belts etc. These two properties often play a major role in determining the suitability of any raw material for any specified application. It is, therefore, of utmost importance to determine these characteristics accurately, conveniently, and quickly.

### **Fastness properties**

One of the test for determination of color fastness for dyed or printed leather and accessories is the crocking test. This test is used for the determination of color fastness against rubbing, either under dry or wet condition. In this test a moving brass finger of specified shape and size rubs against the test specimens under a fixed load. The amount of color lost by the test specimen and the amount of color transferred to a piece of abrading Leather fixed over the base of the moving finger are graded with the help of standard grey scales to evaluate the color fastness of the sample under test rubbing.

<b>Self-Check 3&amp;4</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:



1. \_\_\_\_\_ in general has specific and unique characteristic it is natural and live material. (4pts)
2. One of the test for determination of color fastness of dyed of printed leather and accessories are the \_\_\_\_\_ test. (4pts)
3. Leather is fibrous cellular material, which contains air between the fibers is the characteristics of \_\_\_\_\_. (4pts)
4. After the tanning process, finishing operations will make the leather look nice and ready or used in many different colors, grains, softness etc is the characteristics of \_\_\_\_\_. (4pts)
5. One of the test for determination of color fastness of dyed of printed leather and accessories are the \_\_\_\_\_. (4pts)

**Note: Satisfactory rating - 20 points**

**Unsatisfactory - below 20 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_





## Information Sheet-5

## Using OHS practices relevant to materials uses

### Safe Materials Handling

"Safe Material Handling" stresses eight general rules for safe material handling that can be adapted to any workplace:

1. Size up the load.
2. Look for special hazards.
3. Wear appropriate protective equipment.
4. Use the right equipment the right way.
5. Watch out for pinch points.
6. Check your path.
7. Report material damage to your supervisor.
8. Know when to ask for help.

Upon successful completion of this course you will be better prepared to:

- Assess a load for safe handling.
  - Assess a load's weight to safe handling.
  - Assess a load's size to safe handling.
  - Assess a load's shape to safe handling.
- Recognize hazardous loads.
  - Explain the importance of special handling instructions.
  - Identify conditions that are hazardous to handling a load.
- Use proper personal protective equipment.
  - Identify correct hand protection for a specific hazard.
  - Identify the risks of injury from not using proper equipment.
- Operate handling equipment safely.
  - State the general safety rules for material handling equipment.
  - Explain capacity limits.
  - Relate proper equipment operation to personal safety.
  - Identify locations where hazards are greater for equipment operation.

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- List types of material handling equipment.
- Safely travel with a load.
  - List benefits of checking the travel path.
  - Identify locations where equipment operation is hazardous.
  - Explain pinch points.
- Respond properly to damage loads.
  - Describe options to take with damaged loads.
  - State the results of unreported damaged materials.
- Recognize the need for help.
  - Judge circumstances that require assistance.

### **Safe storage of materials**

Handling and storing materials involve diverse operations such as hoisting tons of steel with a crane; driving a truck loaded with concrete blocks; carrying bags or materials manually; and stacking palletized bricks or other materials such as drums, barrels, kegs, and lumber. The efficient handling and storing of materials are vital to industry. In addition to raw materials, these operations provide a continuous flow of parts and assemblies through the workplace and ensure that materials are available when needed. Unfortunately, the improper handling and storing of materials often result in costly injuries. OSHA recommends that trainee establish a formal training program to teach students how to recognize and avoid materials handling hazards. Instructors should be well versed in safety engineering and materials handling and storing. The training should reduce training place hazards by emphasizing the following factors:

- Dangers of lifting without proper training.
- Avoidance of unnecessary physical stress and strain.
- Awareness of what a students can comfortably handle without undue strain.
- Use of equipment properly.
- Recognition of potential hazards and how to prevent or correct them.

<b>Self-Check 5</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Write the eight general rules for safe material handling that can be adapted to any workplace:/10points/
2. what are the proper personal protective equipment?/2points/
3. what are the Operate handling equipment safely?/4points/
4. Handling and storing materials involve diverse operations such as hoisting tons of steel with a \_\_\_\_\_/1point/
5. The training should reduce training place hazards by Emphasizing the owing factors are:/3points/

**Note: Satisfactory rating - 20 points                      Unsatisfactory - below 20 points**

You can ask you teacher for the copy of the correct answers.

<b>Answer Sheet</b>		Score = _____
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Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Short Answer Questions

### List of Reference Materials

1. Learning guide from leather Industry Development Institute (LID)
2. Hides and skins /teaching material, Genanaw Asfaw, LLPTI, ETHIOPIA, 2008

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3. Leather technologist pocket book, Society of Leather Technologists and Chemists, UK, 1999
4. Possible defects in leather production, Gerhard John, Lampertheim, 1997
5. Skin, hide and leather defects, Jean J.Tancous, Leather Industries of America Inc., 1992

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