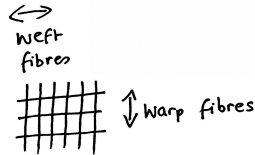


2.1.6

TEXTILES

- Textiles are fabrics made from :
 - **Natural Fibres** (eg) : Cotton, Wool.
 - **Man Made Fibres** (eg) : Viscose, Acetate.
 - **Synthetic Fibres** (eg) : Nylon, Polyester.



TEXTILES AS A RESOURCE IN THE HOME

- Textiles have various uses in the home :
 - Clothing.
 - Soft Furnishings.
 - Mattresses.
 - Carpets.
 - Upholstered Chairs.
 - Household linen – towels, sheets, tablecloths/

NB : FUNCTIONS OF CLOTHING

- Clothing helps to protect us from the weather (eg) : jumpers, raincoats.
- Can be worn as a uniform in certain jobs (eg) : nurse, garda.
- Clothing can be protect people from injury (eg) : flame retardant finishes (fireman)
- They may be worn for their aesthetic appeal (ie) : fashionable clothes look well and give the wearer confidence.
- Clothing may be worn to express individuality (eg) : bright, bold colours for 'outgoing' personalities.
- Clothing is part of norm of society (ie) : expected behaviour.



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NB : FACTORS TO BE CONSIDERED WHEN CHOOSING TEXTILES FOR THE HOME

COST

- Cost must be considered. Some natural fibres are quite expensive (eg) : Silk, compared to some man made fibres like nylon or polyester which are much cheaper.
- The consumer must consider the cost of the textile/fabric ensuring while also getting quality goods which suit the purpose they are intended for.

EASE OF CLEANING

- Many textiles may be dry clean only. The care label should always be read before purchase of the textile as it is not practical to have "Dry Clean Only" on garments that are worn regularly.
- When choosing a sofa upholstered with fabric that is permanently stitched to the sofa, removable covers may be purchased.

DURABILITY

- How long the textile/fabric will last or withstand "wear and tear" is particularly important for tea towels, bath towels, bed linen, carpets, soft furnishings as all of these items are used on a daily basis.
- They would get worn in a short space of time if they were not durable which would not be practical (eg) : tea towels should be made from 100% cotton.

PERSONAL CHOICE

- Greatly affects the choice of textiles as people's taste varies with regard to colour, texture, pattern and style of items differ (eg) : some people like linen as a fabric for clothing because it is cool to wear in summer, others dislike linen as it creases easily.
- Many like leather as a fabric for seating because it is easy to keep clean and it is very durable, however others dislike leather as it can be quite cold to sit on.

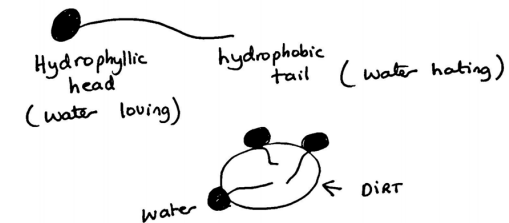
FABRIC PROPERTIES

- There are many questions consumers should ask themselves before bringing textiles into the home.
- **Example** : The fabric used for curtains should have properties that include fade resistant, shrink resistant and flame resistant.
- Beach towels should be a colourfast, absorbent and a soft texture.

PRINCIPLES OF WASHING CLOTHES

A : DETERGENT

- Detergent lowers the surface tension of water (due to the presence of **(1)Surfactants**). This means clothes get wetter faster as the water penetrates the fibres deeply. The wetter the fabric, the better the detergent will work.
- **Surfactants** have a hydrophobic part and a hydrophilic part. The hydrophobic part attaches to the dirt/grease on the clothes.



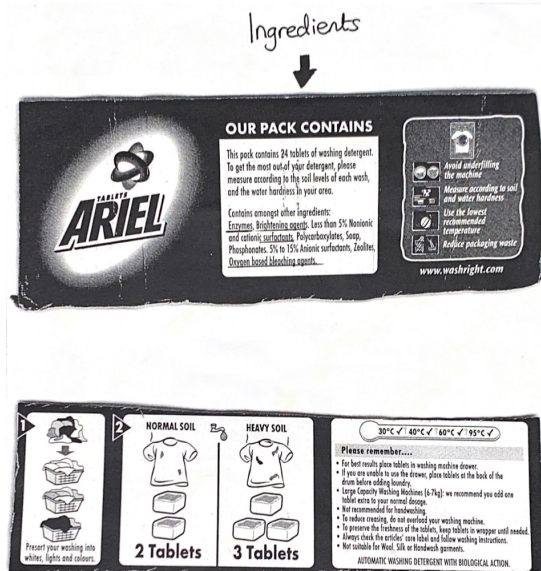
- The hydrophilic part attaches to the water, the water has the greater "pull" and the dirt is lifted off the clothes and remains suspended in the water.
- **(2)Enzymes** are present in biological detergents, they "digest" or break down protein stains (eg) : blood, egg etc. The temperature of water must be 40°C or lower otherwise the enzymes will be denatured and will not work leaving stains on clothes.
- **(3)Oxygen Bleach** in detergents helps remove stains from clothes.



- **(4)Fluoresces/Brightening Agents** are whitening agents that make clothes “white” (eg) : “Daz” washing powder or “Ariel”.

Summary of Ingredients present in Detergent

- Surfactants
- Enzymes (biological detergent)
- Oxygen bleach
- Fluoresces.

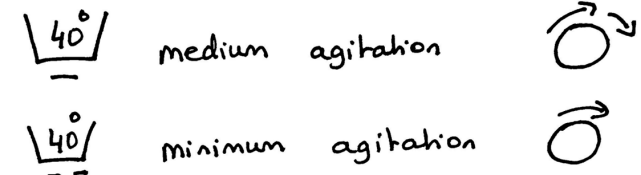


B : FABRIC CONDITIONERS

- Usually liquid (eg) : “Lenor” or “Comfort”.
- Their function is to soften the clothes (eg) : towels, jumpers.
- The principle of fabric conditioners is based on :
 - 1 : They neutralize the pH of the fabric by the addition of a small amount of acetic acid to inactivate any detergent left on clothes after washing.
 - 2 : Cationic surfactants present in fabric conditioner neutralize anionic surfactants to prevent static electricity therefore fabrics are softer and smoother.

C : AGITATION

- Agitation refers to movement of the drum during the wash cycle.



D : HARD WATER

- Hard water contains calcium and magnesium hydrogencarbonates (bicarbonates) or sulphates.
 - It is difficult to make a lather with hard water, extra detergent is needed.
 - “Calgon” must be used to prevent limescale buildup on the heating element.

E : WATER EXTRACTION

- It is important to remove water from clothes after washing as water left in clothes may damage fibres.
- Water may be remove by : spinning, dry dry, tumble dry.



Summary of Principles of Washing Clothes
<ul style="list-style-type: none"> • Detergents • Fabric Conditioner • Agitation • Hard Water • Water Extraction.

POINTS ON SAFETY WHEN CHOOSING TEXTILES

- Fabrics made from **thick yarns and close weave burn more slowly** than high pile or brushed fabrics or loosely woven fabrics.
- The **shape of the garment** should be considered as loose dressing gowns, full skirts and flowing nightdresses may catch fire easily.
- **Synthetic foam is outlawed** and should not be used as an upholstery filling material. When near fire, it releases gases which burst into flames and engulf a room (Stardust Fire – Artane Feb 14th/1981) Combustion Modified Foam (CMF) must be used.
- **Choose fabrics that smoulder** (eg) : wool/cotton rather than fabrics that melt when near flames (eg) : nylon.
- Fabrics **made from a mixture of fibres** (eg) : polycotton, burn **much faster** than fabrics made of one fibre (eg) : polyester.

COMPARE TWO TYPES OF FLAME RETARDANT FINISH USED ON FABRICS

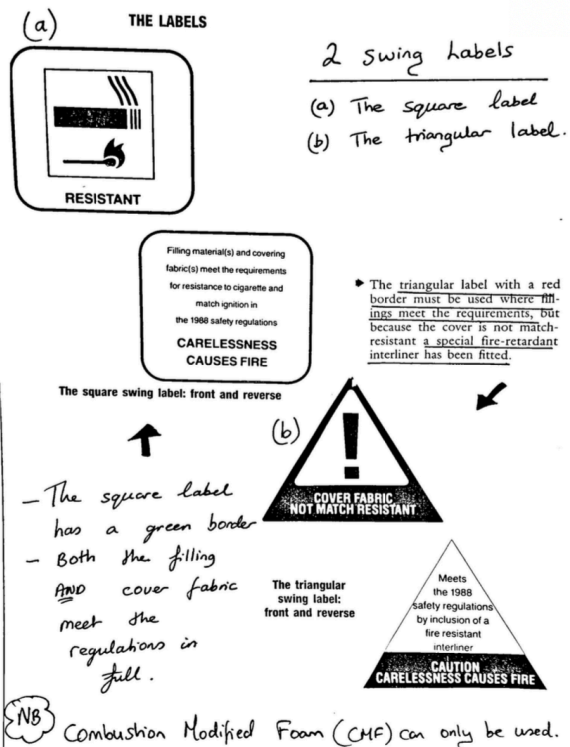
Name	Coated flame retardant finish eg. Proban	Inherent flame retardant finish eg. Pyrovatex
How it is made	The fabric is already woven and flame retardant finish is <u>coated</u> on the surface of fabric	Fibres are <u>treated individually</u> with a flame retardant finish <u>before</u> being woven into a fabric.
cost	inexpensive	expensive
Durability	may be removed by washing / dry cleaning.	can withstand washing / dry cleaning up to 10 washes a year over 5yrs

- The syllabus states, students should know “the identification and effects of one fire retardant finish” → **PYROVATEX** (inherent flame retardant finish).
- Learn ALL points in this table plus :
 - Does not cause skin irritation.
 - Use on protective work wear, children’s nightwear, military clothes.



NB : REGULATIONS

- Industrial Research (Fire Safety) and Standards (Domestic Furniture) Order 1988.
- The above act came into effect in March 1989.
- It encompasses all upholstered domestic furniture such as arm chairs, beds, cushions, pillows, children's cots and pushchairs.
- Under this law/act, all upholstered seating furniture must carry two distinct labels :
 - Swing or Display label
 - A : Square label.
 - B : Triangular label.
- **NOTE** : Each article in a suite of furniture must be labelled.



PERMANENT LABELS

Each piece of furniture must also be accompanied by detailed information in the form of a permanent label – stitched or otherwise permanently attached to the furniture.

The required information includes:

- the name and address of the manufacturer or importer
- manufacturer's batch number or item identification number
- date of manufacture or importation
- brief description of filling and cover materials
- whether a fire-resistant interliner has been included
- the warning 'Carelessness causes fire'.

The regulations allow the use of a 'long' or 'short' label. The long label must provide all the above information. The shortened version must include some of the above – the manufacturer's batch number, for example – and include assurances of compliance with the regulations. In addition, all the other information required for the long label must be held on record and made available to the public.

From March 1993 second-hand furniture (apart from antiques made before 1950) comes under identical labelling requirements.

The regulations – which are difficult to enforce – are implemented by the Department of Enterprise and Employment. Day to day enforcement is the job of the Office of the Director of Consumer Affairs.

CARELESSNESS CAUSES FIRE

Batch/I.D. No.....

To comply with the Furniture and Furnishings (Fire) (Safety) Regulations 1988:

this item does not require a Schedule 3 interliner, all foams, fillings and composites have been tested to ensure compliance with the relevant ignitability test, covers and fillings are cigarette resistant, covers are match resistant.

Further details are available from your retailer.

An example of the (short) permanent label

Ref: Consumer Choice magazine



PROPERTIES AND CARE OF COMMON FABRICS

NAME OF FABRIC	PROPERTIES	CARE
COTTON	<ul style="list-style-type: none"> • Strong, particularly when wet. • Hygroscopic. • Creases easily. • Cool. • Flammable. 	<ul style="list-style-type: none"> • Machine wash up to 95°C. • Can be bleached. • Hot Iron (210°C) • Usually pre-shrunk before used in garments.
WOOL	<ul style="list-style-type: none"> • Absorbent. • Weak when wet. • Elastic when wet/stretch. • Shrinks if temperature is too high. • Does not burn easily. 	<ul style="list-style-type: none"> • Do not tumble dry. • Medium/warm iron. • Do not use bleach. • Minimum agitation. • Hand wash or 30°C wash with minimal agitation.
POLYESTER	<ul style="list-style-type: none"> • Non absorbent. • Lightweight → dries quickly. • Strong. • Smooth. • Does not burn easily. 	<ul style="list-style-type: none"> • Can use bleach. • Machine wash 50°C with medium agitation. • Warm iron (160°C)
NYLON	<ul style="list-style-type: none"> • Crease resistant. • Lightweight → dries. • Melts if heated too much. • Washing temperature. • Low water absorbency. 	<ul style="list-style-type: none"> • Cool iron (120°C) • Machine wash 50°C with medium agitation. • Do not tumble dry.



PROPERTIES OF FARBICS

• DESIRABLE :


- Stain Resistant.
- Pre Shrunk.
- Crease Resistant.
- Strong when Wet.
- Colour Fast.
- Cool.
- Hard Wearing.

• UNDESIRABLE :

- Creases Easily.
- Irritates Skin.
- Shrinks.
- Flammable.
- Stains Easily.

CARE LABELLING

- CARE LABELS should show symbols for washing, drying, ironing etc.


 Do NOT BLEACH


 the garment can be tumble dried.

 cannot tumble dry




 Hand wash only

 DRY Flat


 line dry

 DRIP dry

Tumble Dry {  Reduced Heat setting
 Normal setting


{    } DRY Clean

 cool iron

 warm iron

 Hot iron

 chlorine Bleaching

 temp. of water in washing Machine

 agitation (little)

 medium agitation.

- * Tags on clothes contain the following information
- (i) country of origin eg. Made in Ireland
 - (ii) size eg. Size 12
 - (iii) FABRIC composition eg. 100% cotton
 - (iv) Brand or Designer
 - (v) care / instructions.

SAMPLE QUESTION

4. When choosing textiles for the home, the consumer must take a number of factors into consideration.
- (a) Enumerate these considerations. (16)
 - (b) Explain the working principle of a detergent. (8)
 - (c) Outline the main provisions of the Fire Safety (Domestic Furniture) Order 1988. (10)
 - (d) Differentiate between inherent flame-retardant fabrics and coated fabrics. (12)
 - (e) What does the following symbol stand for? (4)

