

VIDYA BHAWAN BALIKA VIDYAPEETH

STUDY MATERIAL SCIENCE

CLASS-VIII

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Teacher : Poonam Kumari

▸ Synthetic Fibre & plastics

Polyester

As the name indicates, polyester is a polymer of a group of chemicals called esters-the chemicals that give fruits their sweet smell. The fabrics made from polyester are easy to wash and remain wrinkle-free, which makes them attractive as dress material. The commonly used terylene is a polyester. Its chemical name is polyethylene terephthalate. It is also known as PET and is the same material that is used for making plastic drink bottles.

However, polyester is highly flammable, so care needs to be taken when wearing polyester clothes near a fire. Polyester is often mixed or blended with natural fibres to make it more comfortable to wear. Terrycot and polycot are fabrics made by blending polyester with cotton. Polywool is a blend of polyester and wool, while polysilk is made by blending polyester with silk

Acrylics

Woollen fabrics keep us warm in winter, but they are expensive and are easily attacked by insects. These days the woollen garments available in the

market are not made of wool but of synthetic fibres called acrylics. Acrylic fibres are made from a polymer called polyacrylonitrile. The advantage of these fibres is that they look and feel like wool and can be spun and knitted like natural wool. Although they provide less warmth than pure wool. They are used because acrylics are less expensive, easier to wash, more durable and are not attacked by insects.

Characteristics of synthetic fibres.

Being solid fibres and not hollow like cellulose, synthetic fibres do not absorb water. This is the reason why synthetic fibres are not suitable for making bath towels. Wet synthetic fibres need to be drip dried since it is not possible to squeeze out water from them. However, compared to cotton, they dry up much faster and are favoured as travel wear.

A major disadvantage with synthetic fibres is that compared to natural fibres, these can catch fire easily. Moreover, they melt instead of burning when ignited and so stick to a

persons body causing severe burns. It is, therefore, not advisable to wear clothes made of synthetic fabrics while working in the kitchen, in a laboratory or while handling fireworks