Contribution of Elastomer Chemistry & Technology and Industry to Modern Life

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Introduction

Rubber is a group of industrial materials like metals, fibers, wood, plastics, glass etc. on which the world of modern technology depends.

The world consumption of rubber is in the order of about 28 million tons per annum and has been increasing in the past years at a rate of about 2 - 3% per annum.

Out of this about $\frac{1}{3}$ rubber consumed is natural rubber. The remaining $\frac{2}{3}$ is man made synthetic rubber mainly produced from petroleum fractions.
The unique and versatile properties of rubber have made it highly indispensable for the modern way of life. The mobility or speed of movement of modern world is mainly dependent on rubber in the form of bicycle tyres to highly sophisticated pneumatic tyres for motor vehicles and aero planes etc. Its importance as strategic material due to its valuable contribution in defense application is well recognized.

The distinguishing property of rubber is not used alone but reinforced with textiles, metals etc. Contribution of rubber in the field of engineering, space research, medical sciences, family planning etc. is vital.
Rubber products usage in different sphere of life improves human life quality – mobility (time saving), comfort, population control & infection control, different areas of medical field, plays very important role in defense of the country, help in the food production & water conservation.
Mobility

One cannot imagine high speed mobility of present world without rubber. The mobility or speed of movement of modern world is mainly dependent on rubber in the form of bicycle tyres to highly sophisticated pneumatic tyres for motor vehicles and aero planes etc.
Bullock Cart
Bicycle Tyres
Passenger Car Tyre
Truck Tyres
Tractor Tyre
Aero Tyres
Conveyor Belt
Comfort

Rubber products provide comfort to human in daily life in the form of different products like .
Latex Mattress
Household Gloves & Hot Water Bag
Sport Shoe & Hawai Chappel
Elastic Threads for under Garments
Medical

Rubber based components play important role in medical field – in surgery, medicine, protection against infection / infectious disease etc.
Sports & Medical Application

[Images of various medical and sports applications, including knee braces, wrist supports, and waist belts.]
Surgical Gloves
Cathetor

- size: in French scale and millimeters
- balloon
- bladder opening
- urine drainage port
- balloon port: volume of fluid recommended to inflate balloon marked
IB Caps

The central part of the lid must be removed

Rubber stopper
Population / AIDS Control
Strategic Importance / Defense

Rubber products play vital role in defense preparation and activities in the form of different products & components for different defense & space hardware.
Fighter Aircraft
Space Application
Battle Tank & Armored Vehicle
Naval Applications
Naval Usage
Dock Fender
Agriculture
Agriculture
Agriculture
Water Conservation / Rubber Lining of Canal
Recycling / Green Technology
Reclaim Rubber
Equipments for Reclaim rubber making
Petroleum
Petroleum Discharge Hose
Offshore Hose
Waterproofing – Rubberized Fabric
Nano Technology- usage of nano filler in rubber products

Nanoparticle fillers with cross-linkings to rubber matrix
FOOTBALL BLADDER – INFLATED & UNINFLATED
AUTO TUBE & INFLATED BALLS
Hot Water Bag

LPG Tubing

Hose
Composite (Reinforced Hose)
Industrial / Infrastructure / Building Profile, Rolls, Tiles, Anti Vibrations, Insulation

EPDM Colors

Blue  Green  Purple  Mid Brown  Teal  Bright Green
Beige  Terra Cotta  Gray  Orange  Yellow  Light Blue

[Images of EPDM colors and surfaces]
Rubber Tiles
Tiles, Anti Vibrations
Profile for Vehicle / Building & Windows
Rubber Roll
Printing Roller

Metal Printing Roller

Rubber Roller
Printing Machine
Anti Vibration Bearing
Bridge Bearing Pad
Rubber Lining Protection