RUBBER CHEMICALS AND PROCESSING INDUSTRIES

NATURAL RUBBER

Introduction
Properties of Natural Rubber
Grades of Natural Rubber
Processing Methods
Compounding Ingredients
Further Processing
Uses
Typical Vulcanisate Properties of ISNR Grades

SYNTHETIC RUBBER

Introduction

ACRYLIC RUBBER

Introduction
Manufacturing Process
Properties
Processing
Uses

ACRYLONITRILE BUTADIENE RUBBER

Introduction
Manufacturing Process
Properties
Processing
Uses

BUTYL RUBBER

Introduction
Manufacturing Process
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Properties
Processing
Uses

NITRILE RUBBERS

Manufacture
Procedure of Nitrile Rubber with Trade Names
Compounding
Properties
Applications
Automotive Fuel House Compound
SILICONE RUBBERS

Introduction
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SYNTHETIC POLYISOPRENE RUBBER

Introduction
Manufacture
Structure
Properties & Application
Polybutadiene Rubber
Structure
Manufacture
Properties

URETHANE RUBBERS

Introduction
Manufacturing process
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Uses

RUBBER POWDER

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Manufacturing Technology of Rubber Powder
Spray Drying of Latex
Flash Drying
Freeze Drying
Co-Precipitation Method
Preparation of Starch Xanthate
Preparation of Rubber Powder

RUBBER RECLAMATION

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Properties & Applications
Manufacturing Methods
Digester Process
Reclamator Process
Pan Process
Engelke Process

PIGMENTS AND COLOURS

Introduction
Inorganic Pigments
White pigments
Red Pigments
Yellow Pigments
Green Pigments
Blue Pigments
Organic Pigments

RUBBER BLOWING AGENTS

Introduction
Benezene sulphonyl hydrazide
p toluene sulphonyl hydrazide
p Poxybis
Diazamino benzene
Azoisobutyronitrile
Dinitroso Pentamethylene tetramine
N.N. Dinitroso N.N-Dimethyl Terephthalamide
Azo Dicarbon Amide
Sulphonyl semicarbazides
Others

LATEX DIPPED GOODS

Introduction
Dipping System
Dipping Method
Straight Dipping
Coagulant dipping
Dipping with heat Densitised Latex
Compounding
Toy Balloons
General Balloons Formulations
Prophylactics
More Formulations for Contraceptives
Foot wear
Gloves
Surgeon's Gloves
General Formulation
Disposable Free Size Surgical Gloves
Household Gloves
Industrial Gloves
Gloves by Lamination Dipping
Surgical Investigatory Fingers

LATEX FOAM PRODUCTS

Introduction
Formulaes of Compounding

LATEX BASED ADHESIVE & RUBBER SOLUTION

Introduction
Formulations of Rubber Solutions & Latex Based Adhesives
Tubes Joining Solution
Lamination Adhesive
Metal To Metal Or Rubber Adhesive
Nitrile Rubber Base Adhesives
General Purpose Black Curing Cement
Leather Adhesives
Adhesive for Boiling Vinyl To Fabrics
Neoprene Based Cements
Pressure Sensitive Adhesives
Latex Based Adhesives
Advantages of Latex Adhesive
Over Rubber Solutions
Disadvantages of Latex Adhesive
High Viscosity Leather Foam Adhesive
Paper & Leather Latex Adhesives
General Purpose Cement
Waterproof Cement
Adhesive for paper And Leather
Adhesive for Bonding Soles and Foxing to Canvas
General Purpose Chloroprene Latex Adhesives

RUBBER MOULDED ARTICLE

Introduction
Moulds
Various Formulations
Erasers
Pencil Eraser
Ink Erasers
Bottle Rubber Stoppers
Rubber Parts & Sheets
Nitrile Rubber Compound for Oil Resisting Rubber Parts
Butyl Rubber Compounds

RUBBER BELTINGS

Introduction
Conveyor Belts
Process of Manufacture
Preheating
Vulcanisation
Compounding & Formulations
Conveyor belt formulations from NR & SBR
Formulations for Conveyor Belts
Conveyor Belting Compound Based on Butyl Rubber
Nitrile Rubber Based Conveyor belt Cover
Rubber V-Belts
Manufacture

RUBBER ROLLERS
Introduction
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Curing
Finishing
Compounding
Printing Rollers
Formulae For Printing Rollers
Chloroprene Based
Printing Roll Formulations
Printing Roll Formulations Based On Natural Rubber
Typewriter Rollers
Rice Mill Rollers
Paper & Textile Mill Rollers
Heavy Duty Paper Mill Roller
Paper Mill Rollers (Black)
High Speed Paper Mill Rollers
Textile Mill Rollers

RUBBER FOOTWEAR

Introduction
General Compounding Considerations
Injection Moulding of Soles And Heels
Formulations of Rubber Footwears
High Built Boot Upper
Upper & Sole Formulations
Sole & Foxings For Canvas Shoe
Solutions For Canvas Upper

TYRES & TUBES

Introduction
Cycle Tyres
Manufacture of Cycle Tyres
Some Tread Compounds
Carcass Compound
Curing Bags
Formulations for Curing Bags
Cycle Tubes
Compounding
Black Tube Compounds
Red Cycle Tubes
Butyl Based Tube Formulations
Rickshaw Tyres
Auto Tubes and Tyres with formulations
Automotive Tubes
Very Big Size Tube

RUBBER GASKETS, SEALS AND WASHERS

Introduction
Selections of Rubber for Oil Seals
Types of Seals
Manufacturing Process
Gaskets from Sheets
Formulations of Rubber
Gaskets, Washers & Seals
Pressure Cooker Gasket
Formulae of Seals & Cords
"Q" Channel & Refrigerator Gasket
Automotive, Seals, Rings & Gaskets
Elastic Rubber Bands
O-Rings & Gaskets

RUBBER AUTO PARTS

Introduction
Automotive Brake Linings
Recipe of Brake Lining
Brake Cylinder Cu
Brake Chamber Diaphragm
Brake Pedal Pads
Compounds of Various Hardness
Recipe for Grommets
Formulations Based on Nitrile Rubber
Recipe for Clutch Plate
Sponge Based Items
Oil Seals for High Temperature
Bellows & Dust Seal

VARIOUS OTHER IMPORTANT FORMULATIONS

Household Rubber Gloves
Surgeon's Gloves
Contraceptives
Transparent teats/Nipples
Latex Thread
Packaging Pressure
Sensitive Adhesive
Tubing, Laboratory
Water Tubing
Seals LCM Vulcanisation
Cable Insulation
Rubber Coated Fabrics
Mouldings
Erasers
Erasers for Typewriters
Stereo Rubbers
Conveyor Belt Covers
Conveyor Belt
Ebonite Lining Adhesive
Automotive Hose Lining
Expanded Rubber
Shoe Soles (High Quality)
Moulded Shoe Sole
Battery Plate Separator
Truck Tyre Retreads
Winter Passenger Tyre Retreads
Motorcycle/Scooter Treads
Brake Seals
Detergent Resistant Washing Machine Seal
Refrigerator Gasket
Pressure Cooker Gasket
Flame Retardent Foam
Moulded Foam
Moulded Foam (Dunlop Method)
Spread Foam
Baby Bottle Teat
Rug Anchor Backing (Washing)
Woven Carpet Backing
Automotive Bushings
Automotive Bumpers

POLYMERS RELATED TO RUBBERS

Polyethylene
Properties
Applications
High Density (Linear) Polyethylene
Properties
Applications
Fabrication Equipment
Film & Sheeting
Injection Moulding
Blow Moulding
Wire & Cable
Pipe
Polyvinyl Chloride
Manufacture
Applications
Copolymers
Fabrications
Rotocast Doll Formulations
PVC Compound For Rigid Pipe

COMPOUNDING

Introduction
Ingredients
Fillers & Other Additives
Vulcanising Agents
Accelerators
Antioxidants
Miscellaneous Ingredients
Mixing Methods
Mixing Cycle
Few Formulations

PROCESSING METHODS

Mixing
Moulding
Extrusion
Calendering
Composition for Calendering Compounding
Composition for Frictioning Compounds
Composition for Topping Compound

TESTING

For Processibility
Optimum Cure Time
Plasticity Test
Mooney Viscosity
Cure Meters
Physical Testing of Vulcanisates
Tensile Tests
Hardness
Rebound Tests
Tear Tests
Abrasion Tests
Ageing Tests
Fatigue Flex Cracking
Cut Growth

TRADE NAMES AND CHEMICAL COMPOSITIONS

Elastomers
Plastics/Resins
Fillers
Softeners
Accelerators
Antioxidants
Anioxonates
Blowing Agents
Emulsifiers
Peroxides
Stabilisers

SUPPLIERS OF PLANT AND MACHINERIES FOR RUBBER AND ALLIED PRODUCTS

SUPPLIERS OF RUBBER RAW MATERIALS AND CHEMICALS

PROJECT PROFILES

Asbestos Gasket Sheet
Auto Tyre Tube & Flaps
Cycle Tyre & Tubes
Crumb Rubber
Disposable Surgical Examination Gloves
Hard Rubber Battery Container
Hawai Chappals
Industrial Gloves
Latex Rubber Condoms
Oil Seals
Rubber Balls
Rubber Auto Parts
Rubber Beading for Automobiles
Rubber Sheet for Automobiles
Rubber Hose Pipe
Rubber Hoses
Rubber Powder
Rubberised Cloth
Rubber Band
Rubberised Coir
Rubber Process Oil
Rubber Transmission Belt & Belt
Tyres, Tubes & Flaps
Tyre Retreading by Cold Process

DETAILS OF RUBBER PROCESSING EQUIPMENTS AND MACHINERIES

Rubber Mixing Mill
Hydraulic Press
Battery of Presses
Precured Tread Rubber Press
Rubber Bale Cutter
Flap Press
Semi/Automatic Power Pack
Hydraulic Power Pack
Hydraulic System Control Valves
Dispersion Kneader
Calender Machine
Extruder Machine

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