

JAY ELASTOMERS PVT. LTD



A PRESENTATION

A COMPANY WHICH OFFERS CUSTOMISED SOLUTINS

www.jayelastomers.com



RUBBER ROLL

A rubber roll is a cylindrical object made of rubber or a combination of rubber and other materials. It is commonly used in various industrial and mechanical applications for its durability, flexibility, and resistance to wear and tear.

Rubber rolls are often found in:

•Printing: Used in printing presses as rollers to transfer ink onto paper.

•Conveyor Systems: Found in factories or production lines for transporting materials

•Textile Industry: Assists in fabric processing and finishing.

•Agriculture: Used in farming machinery for tasks like planting or harvesting.



RUBBER ROLL COVERINGS

Roll linings can utilize both natural and synthetic rubbers, depending on the specific application and requirements. Here are some common types:

Natural Rubbers

1. Natural Soft Rubber: Known for its flexibility, resilience, and abrasion resistance, it's suitable for applications like slurry tanks, pipe linings, and pump linings.

2. Hard Natural Rubber: Offers chemical resistance and is often used in storage tanks and reactors.

Synthetic Rubbers

1. Neoprene (Polychloroprene): Resistant to heat, ozone, and chemicals, making it ideal for water boxes and desalination plants.

- 2. Butyl Rubber: Excellent for high-temperature chemical resistance.
- 3. Styrene-Butadiene Rubber (SBR): Known for wear resistance and stability.
- 4. Hypalon (Chlorosulphonated Polyethylene): Offers exceptional resistance to chemicals and weathering.

Each type has unique properties tailored to specific industrial needs. If you'd like, I can help you explore more details about their applications!



RUBBER ROLL APPLICATIONS

Rubber rolls have a wide range of applications across different industries due to their versatility and durability. Some key applications include:

1. Printing Industry

•Used in offset and flexographic printing machines for transferring ink evenly onto the substrate.

2. Textile Industry

•Assist in fabric handling, dyeing, and finishing processes by providing smooth and controlled movement.

3. Food Industry

•Found in food processing machines for rolling, peeling, or pressing food items while ensuring hygiene and safety.



RUBBER ROLL APPLICATIONS

4. Pulp and Paper Industry

•Used in paper production to manage the paper sheet's smooth movement and to apply coatings or finishes.

5. Conveyor Systems

•Integral to industrial conveyors, helping in material transport across manufacturing and assembly lines.

6. Agriculture

•Employed in farming machinery for operations like seed planting and crop harvesting.

7. Metal and Woodworking

•Aid in polishing, coating, and treating surfaces.

Their adaptability makes them essential in industries where precision, flexibility, and durability are critical.

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SPECIALIZED ROLLS

Specialized industrial rolls are custom-engineered rollers designed for specific applications across various industries. These rolls are tailored to meet unique requirements such as temperature resistance, load-bearing capacity, surface texture, and durability. Here are some examples:

1. Rubber Rolls

•Used in industries like printing, textiles, and food processing for smooth material handling and coating applications.

2. Polyurethane Rolls

•Known for their high resistance to wear and tear, these rolls are used in heavy-duty applications like steel mills and conveyor systems.



SPEICLIZED ROLLS

3. Steel Rolls

•Common in metalworking and paper industries, these rolls are designed for high precision and strength.

4. Chrome-Plated Rolls

•Used in laminating, polishing, and coating processes due to their smooth and durable surface.

5. Silicone Rolls

•Ideal for high-temperature applications, such as in the plastics and packaging industries.

6. Specialty Coated Rolls

•These include rolls with plasma sprays, hard coatings, or other surface treatments for specific industrial needs.

Each type of roll is crafted to optimize performance in its intended environment.

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JEPL AND RUBBER INDUSTRY

- JEPL entered in Rubber rollers manufacturing from 2013 onwards
- Have developed several compounds for various industries.
- Have developed compounds ranging from 20 Shore A to 70 Shore D.
- Have established compounds for ISNR, NBR, SBR, CSM, SILICONE, CR, EPDM and EBONITE.
- Developed cost effective rollers for Textile , Paper, Steel, Plastic, Lamination, Printing and Plywood industries



Announcement

OTAKA Rubber Company

having significant presence at China, ,Taiwan, Indonesia,

• NOW

Stands for Raw Material and Technical Assistance to relining activity of Otaka's complete proven range of Rubber rolls to India at

JAY ELASTOMERS PVT. LTD.

In marketing

association with JFE-Shoji-India.













Otaka rubber industry CO,.LTD.

Location 〒640-0413 (postal code)

Koudo 77-3 Kishigawa, Kinokawa

city.

ts <u>Estblishment</u> r rolls May 12th, 1924.

Our products

Rubber rolls

Urethane products

Otaka is a pioneer for rubber rolls for industries.









尾高ゴム工業株式会社

Ø

: High friction : No slip

Recommendable usage For Bridle/Deflector/pinch rolls

Those products stand to high friction at any hostile conditions of oil and chemiclas,too.



II: High chemical resistance

Recommendable usage Wringer roll,

Sink roll etc



Some products are very strong for chemicals. Hydrochloric acid /Sulfuric acid/Nitric Acid/Hydrofluoric Acid And Alkalis



III : Heat resistance

Our some products have strong heat resistance.

Recommendable	usage
Bridle roll,	
Deflector roll	
Pinch roll	
Snubber roll	etc



<Products>

High Power (based on NBR)	150°C
Poly Ace	180°C
High Hope	220°C
Hyper Hope	300°C
Ultra Tough Ace	150°C
Mineka V6(based on Urethane)	170°C

※Contact temparature



IV : Durability

Some products have strong durability and long life. Rubber rolls are used to get damaged by iron plates. Durability is very important factor to have long life.

Recommendable usage

Wringer roll Bridle roll, Support roll etc

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Tough Ace



guts





- This is the special Rubber Roll of monolithical molding construction made of the base rubber with prominent elasticity and strength on which grain rubber is evenly dispersed.
- 2. Because of difference of hardness between base rubber and grain rubber of $5 \sim 20$ JISA approx., when the roll is deformed by compression, thus resulted difference of pressure distribution between base and grain rubber stands to the high friction coefficient in contact with the metal strip.
- 3. When oil and/or liquid used for processing are retained on the strip surface, the grains of High Clutch Roll will scrape them off for removal so that high friction coefficient shall be maintained.

【High Clutch U】

Ether High Clutch



Ester High Clutch



Made of high-grade composite material;

On the special urethane rubber base with high abrasion resistant and high tear resistant properties, strong grain rubber particles are evenly dispersed and bound through our particular ratio balance mixing technology.



OTAKA RUBBER(JAPAN) PRODUCTS 1



Fantastic Four! Latest Japanese technology ... Wringer/ Squeeze rolls with Ceramic embedded Rubber Tough to get cut ,Yet to have great Acid / Alkali resistance! Introducing first time in India

Proud to be Made in India



JAYPLON

Completely formulated in India , with more than 50% Bio content Acid / Alkali resistant Rolls used in Steel Plants / Color Coating Lines



Jayplon features

- . Ceramic nano particles distributed in PU resin
- . Biopolyol with phenolic group crosslinked with Isocyanate
- Tested for Hydrochloric acid 25 % at 80 degree
- Tested for Grinding after used in acidic areas
- Tested for Alkalis and rinse solutions
- High cut resistance being polyurethane backbone











Juracoat Roll features

- High suitable Metal Rolls Solvent Resistance
- Dynamically Balance at 300 RPM
- Shore Hardness range 20 to 62

Selection : We have extensively researchedthe PU system to stand for solvents such as• MEK• Diacetone• Roluene

• Xylene • Cyclohexanone





Strip Building Machine







Steel Plants Exclusive



- **Pinch Roll** •
- **Bridle Roll**
- **Metering Roll**
- **Applicator Roll**
- **Deflector Roll**
- **Snubber Roll**
- **Support Roll**





JEPL ADVANTAGE

<u>approach</u> <u>Partnership</u>

• Finding correct **Technical Specifications** to read customer's requirements

On field • technical support for continuous improvement in quality of products

Kaizen

Gemba

Expertise

Chemistry

 Selection of correct type of Resin
 Formulations
 based on
 application



CAPACITY OVERVIEW

Capacity Overview:

In Terms of Roll: Avg 3000 Roll / 3 Shift Working of Polyurethane Coating activity only per Annum

-- POLYURETHANE, Nitrile /Neoprene Rubber, CSM(Hypalon) Rubber,

 Types Of Rolls
 : Wringer, Squeeze, Sink, Pinch Roll for CTL,With OTAKA Materials

 Applicator Rolls, Squeeze Rolls, Bridle, Pinch, Snubber Rolls

 With Polyurethane and specially developed Bio Polyol /Ceramic

 embeded indigenously developed durable and dependable product

 Other Steel Plant Supportive products.....Coil Car Pads, Expander Sleeve, Coil Rest Pads

 Passivation Tank Tile Sealant

COMPANY

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 Location of Plant: PLOT NO. EL-78, A' BLOCK, ROAD NO.16,T.T.C. INDUSTRIAL AREA, MAHAPE M.I.D.C.NAVI MUMBAI 400710, MAHARASHTRA, INDIA
- Telephone
- E-Mail

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GEOGRAPHICAL LOCATIONS





Natural Rubber Biodegradable?

Rubber—the kind you get from a tree—starts off as white and runny latex. Even when it's set into a product, this latex-based, natural rubber is very squashy, pretty smelly, and not very useful. The kind of rubber you see in the world around you, in things like car and bicycle tires, is vulcanized: cooked with sulfur (and often other additives) to make it harder, stronger, and longer lasting.

So what's the difference between raw, latex rubber and cooked, vulcanized rubber? In its natural state, the <u>molecules</u> in rubber are long chains that are tangled up and only weakly linked together. It's relatively easy to pull them apart—and that's why latex rubber is so stretchy and elastic. When latex is vulcanized, the added sulfur atoms help to form extra bonds between the rubber molecules, which are known as cross-links. These work a bit like the trusses you see on a bridge, tying the molecules together and making them much harder to pull apart. Natural, latex rubber is easy to pull apart because the long polymer molecules it contains (made from carbon and hydrogen atoms) are only weakly linked together.



When natural rubber is cooked with sulfur, the sulfur atoms form extra cross-links (shown here as yellow bars) "bolting" the molecules together and making them much harder to pull apart. This process is called vulcanization and it makes the strong, durable, black rubber we see on things like car tires.



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THANK YOU