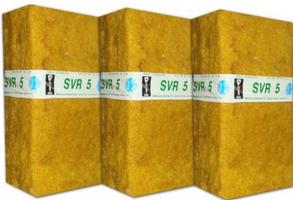


NATURAL RUBBER - Technically Specified Rubber

Properties and Applications

By **Emamou** October, 2021





Sustainable Plantation – Intercropping rubber

Technically Spefified Rubber

About

Emamou commits to delivering only sustainable materials and products for the circular and bioeconomy. Natural rubber is established in our key business portfolios.

Natural rubber (NR) has a highly economic importance thanks to its versatility and wide application. NR is one of the high demanding raw materials in the coming decades and the European laws and regulations require that NR supply to be proved a secure, sustainable and affordable for the EU manufacturing industry up to 2050. NR is now under scrutiny of potential supply risks, and to tackle any uncertainties, sustainability compliance is therefore needed.

Emamou supplies NR of strict quality control and with sustainability performance including environmental and social compliance.



Technically Specified Rubber

General Description

Technically specified rubbers (TSR) are defined based on various technical parameters including dirt content, ash content, nitrogen content, volatile matter, and rubber properties such as its wallace plasticity (PO) and its plasticity retention index (PRI).

Properties:

TSR properties

TSR CV - constant viscosity from latex

- presents high-cost advantage
- non-scorch characteristics of the rubber allow higher curing temperature to be adopted without risk of rejects

Usage

Popularly used for products which require *high quality of rubber*. Examples include:

- Machinery and automobile systems: injection moulded products such as rubber or metal bonded components, railway buffers, bridge bearings, conveyor belt covers, mechanical mountings for engine and machinery, vehicle suspension systems and general automotive components, large truck tyre tread, wind-shield wiper blades, brake assembly units, springs.
- Household and other industrial products: tee gum cushion compounds, low density sponge, masking tapes, industrial rolls, cushion gum for retreading, inner tubes and cement.

Masking tapes:



Automotive components:





TSR properties Usage

TSR L - light colored from latex

- possesses cleanliness and excellent heat ageing resistance
- presents high vulcanisate properties performs high tensile strength, modulus and elongation at break for both black and non black mix.

TSR 5 - Equivalent to one ribbed smoked - possesses excellent strength property, low mill shrinkage, and good tack

Widely used for *light coloured and transparent products*. Examples include:

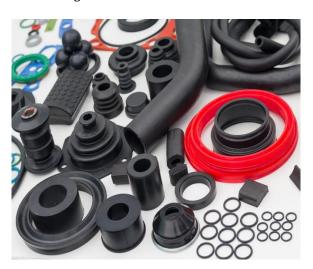
- Household and medical products: surgical and pressure sensitive tapes, pharmaceutical products, surgical and sport foot wear, swim fins and caps, rubberised curtain, bicycle tubes, chewing gum, tennis balls, washing machine gaskets, spread textiles, rubber bands, hot water bottles, spread textiles, rubber bands, hot water bottles.
- *Industrial products:* large industrial rollers for paper printing industry, gas masks, cable sheaths, adhesive solutions and tapes.

Widely used *for car manufacturing and industrial purposes* including friction and extruded products, small components in passenger vehicles, brake seals, sealing rings, resilient bush and mountings, cushion gum, bridge bearing, ebonite battery plate, separators, adhesives, and plant linings.

Medical gloves:



Industrial gaskets:





TSR properties

TSR 5 - Equivalent to one ribbed smoked - possesses excellent strength property, low mill shrinkage, and good tack

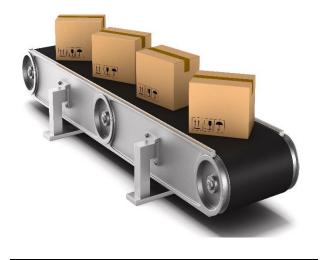
TSR 10 - Field grade material

- performs lower viscosity
- presents easier mixing characteristic

TSR 20

 possesses excellent processing characteristics and good physical properties

Conveyant belt:



Usage

Widely used *for car manufacturing and industrial purposes* including friction and extruded products, small components in passenger vehicles, brake seals, sealing rings, resilient bush and mountings, cushion gum, bridge bearing, ebonite battery plate, separators, adhesives, and plant linings.

Widely used *for car manufacturing and household products* including tyres, inner tubes, joint rings by injection moulding, cushion gum stocks, raincoat proofings, microcellulor sheets, for upholstery and packing, conveyor belts and foot wears.

Widely used *household and industrial products* including foot wear, raincoat proofings, tyres, bicycle tyres, cushion gum stock, micro-cellular sheet for upholstery and packing, conveyor belts, and other general products.

Footwear products:





Standards:







FSC/PEFC

ISO 14001 and ISO 9001

- Sustainable Forest Management
- Chain of Custody

Our services:

- In-depth sustainability consultation on how to process or use specific low-carbon and sustainable materials and products
- Design and deliver products to your specific requirements
- → Services and guidance before and after purchase contract

How we can assist you further:



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