

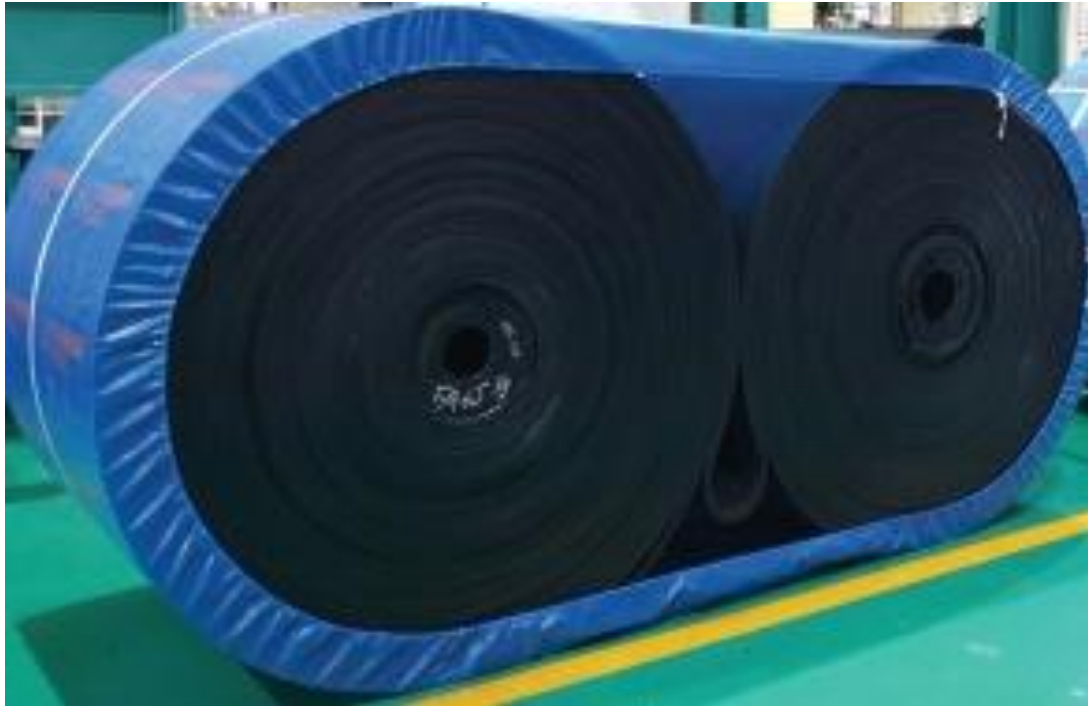
PIONEERING WEAR PROTECTION

RUBBER BELTS FOR CONVEYORS – SPECIFICATION & EXPLANATION



RUBBER BELTS - SPECIFICATION

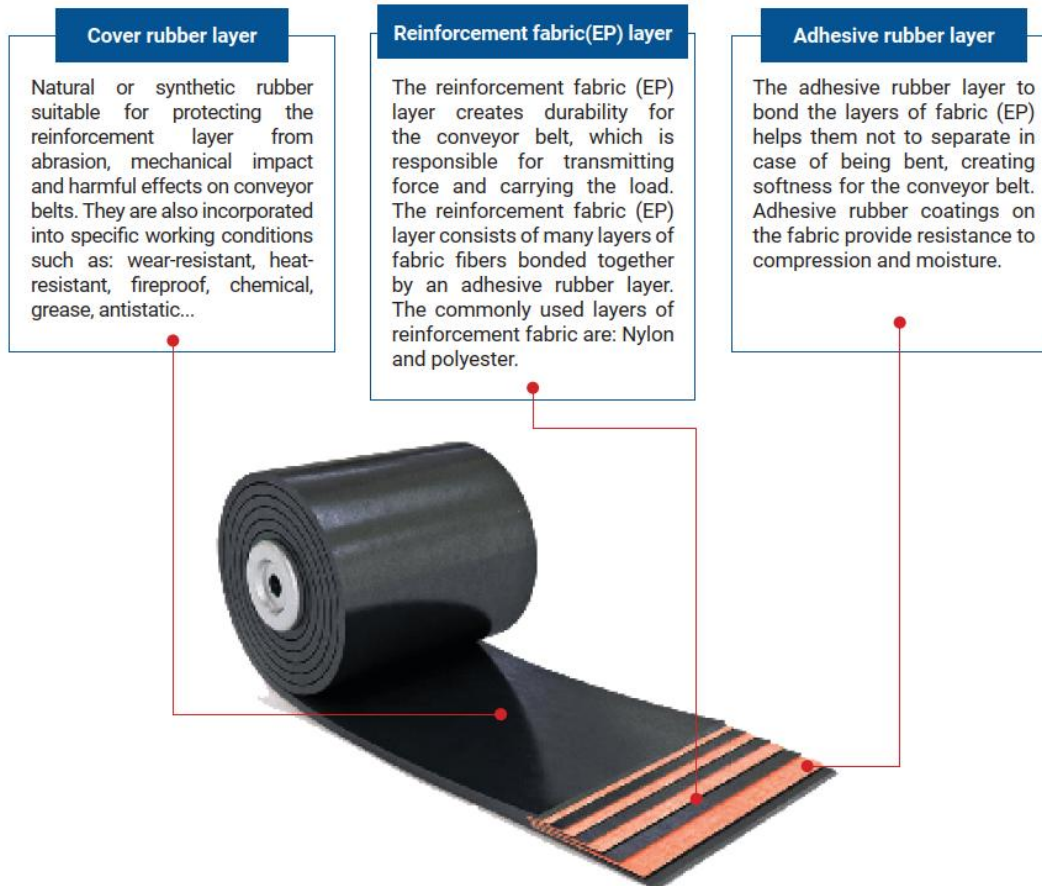
What is a Rubber Conveyor Belt?



A **rubber conveyor belt** is a continuous belt made primarily of rubber compounds, reinforced with fabric or steel cords, used to transport bulk materials or unit loads efficiently over short or long distances

RUBBER BELTS - SPECIFICATION

Main Components



Top Cover (Carry Cover)

Function: Protects the belt from wear, impact, abrasion, heat, oil, or chemicals.

Material: Natural rubber (NR), Styrene-Butadiene Rubber (SBR), Nitrile Rubber (NBR), EPDM, or special compounds.

Thickness: Typically 2–10 mm depending on application.

Carcass (Reinforcement Layer)

Function: Provides tensile strength and shape stability.

Types: Fabric belts: Polyester/Nylon (EP), Cotton, or Nylon/Nylon (NN)

Steel cord belts: For long distances and very high loads

Strength rating: Expressed in N/mm (e.g., EP 315, EP 400, ST 1000)

Bottom CoverFunction:

Protects belt from wear against rollers and pulleys.

Thickness: usually 1.5–6 mm

RUBBER BELTS - SPECIFICATION



SPECIFICATION

number of layers of reinforcement fabric (EP)		1 - 8
Maximum width		2200mm
Maximum thickness		55mm
Type of reinforcement fabric layer (EP)		EP100 - EP500
Maximum product breaking tensile strength		3000N/mm
Standard roll length		100m (Can be produced according to customer's require
Adhesion force	Cover rubber with reinforcement fabric (EP)	$\geq 5\text{N/mm}$
	Reinforcement fabric (EP) layer with reinforcement fabric (EP) layer	$\geq 6\text{N/mm}$

RUBBER BELTS - SPECIFICATION



RUBBER COVER GRADES

Grade	Properties	Typical Application
M / N	Standard abrasion resistance	Sand, gravel
X	High abrasion resistance	Mining, quarry
Y	Moderate abrasion	Construction
HR	Heat resistant up to 350 °C	Clinker, coke
OR	Oil & grease resistant	Recycling, waste
FR	Flame retardant	Underground mining
Food Grade	FDA / EC compliant	Food processing

RUBBER BELTS - SPECIFICATION



Mechanical Properties (Typical – DIN 22102) & Standards & Compliance

Property	Value
Abrasion Loss	$\leq 120 \text{ mm}^3$ (Grade X)
Tensile Strength	$\geq 18 \text{ MPa}$
Elongation at Break	$\geq 400\%$
Adhesion (Cover to Ply)	$\geq 4.5 \text{ N/mm}$

- DIN 22102
- ISO 14890
- EN 12882
- ASTM D378
- BS 490

VAUTID WEAR-RESISTANT RUBBER IS NEEDED IN VARIOUS INDUSTRIES



Mining Industry



Cement Industry



Power Plants



Steel Industry



Recycling Industry



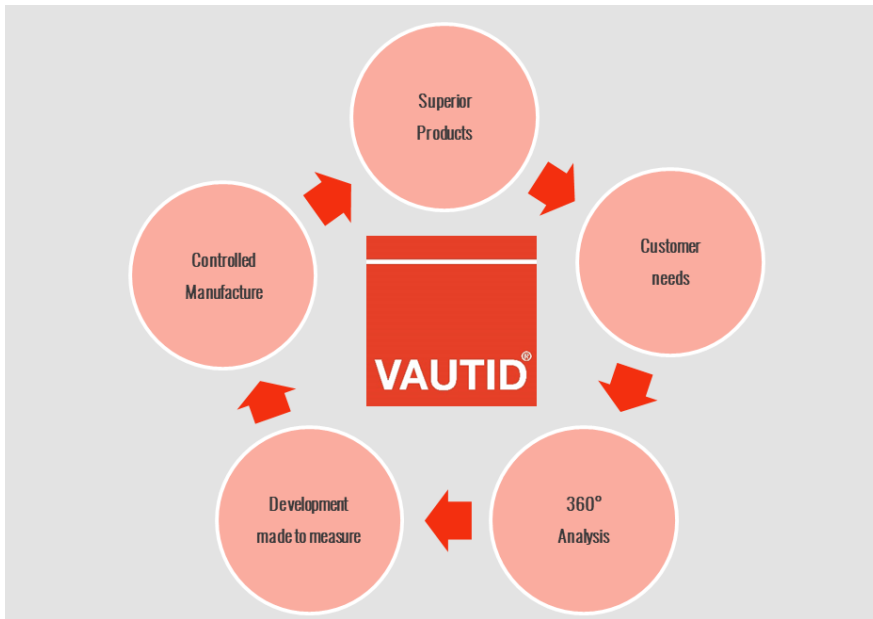
OEMs

WEAR-RESISTANT RUBBER



VAUTID offers system solutions

At VAUTID, the customer receives everything from a single source

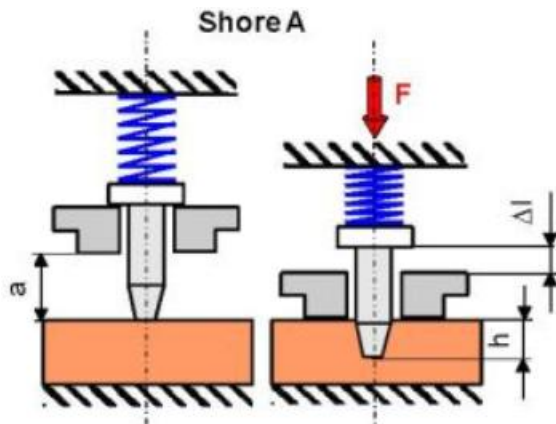


- All products are produced according to high quality standards in our own or Partner production facilities
- VAUTID offers system solutions from one source, from consulting to design and simulation, research and development to the finished product



WEAR-RESISTANT RUBBER

Properties of wear-resistant rubber

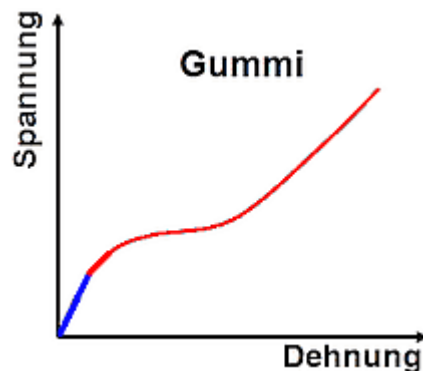


Hardness and elasticity

are important in wear-resistant rubber

Hardness tells us how tough it is, while elasticity means it can stretch and bounce back

Hardness 30-90 Shore A ($HRC \approx 15,7 - 64,7$)



WEAR-RESISTANT RUBBER

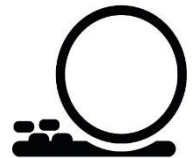
Properties of wear-resistant rubber



Tough against abrasion

and doesn't easily wear out, making it great for things like conveyor belts or durable tires

Our car tires are a great example of how durable rubber can be.



Abrasion

WEAR-RESISTANT RUBBER

Properties of wear-resistant rubber



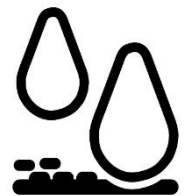
Resistance to chemicals

Rubber is resistant to corrosion unlike steel, which can rust

This makes wear-resistant rubber more durable and less prone to damage in damp or chemically aggressive environments.



For example, ship unloading systems, dredging



Corrosion

WEAR-RESISTANT RUBBER

Properties of wear-resistant rubber



Temperature resistance

is critical to its performance in various applications.

This property refers to how well the rubber performs under extreme temperature conditions without changing its structural properties.

For example, steel industry; cooling systems in the food industry

Temperature resistance -50°C bis $+350^{\circ}\text{C}$.



Temperature

WEAR-RESISTANT RUBBER

Properties of wear-resistant rubber



- **Lightweight**
 - in concrete processing equipment and for farmers' tractors



- **Noise and Vibration Dampening**
 - in sandblasting units and drying systems



- **Cost Efficiency and Low Maintenance**

WEAR-RESISTANT RUBBER

Typical Applications: Endless rubber conveyor belt



WEAR-RESISTANT RUBBER

Typical Applications



Cement Industry



Conveyor Belts:

They transport heavy materials such as

limestone and cement clinker

throughout the production process.

WEAR-RESISTANT RUBBER

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Typical Applications



WEAR-RESISTANT RUBBER

VAUTID®

Typical Applications



Steel Industry



Heat-Resistant Rubber Mats
when casting or rolling metals.

protect the floor and the
employees

WEAR-RESISTANT RUBBER

VAUTID®

Typical Applications



OEMs



Rubber buffers on construction machines such as excavators or rollers

Buffers absorb shock, reduce noise and prevent damage to the machine and the road surface

WEAR-RESISTANT RUBBER

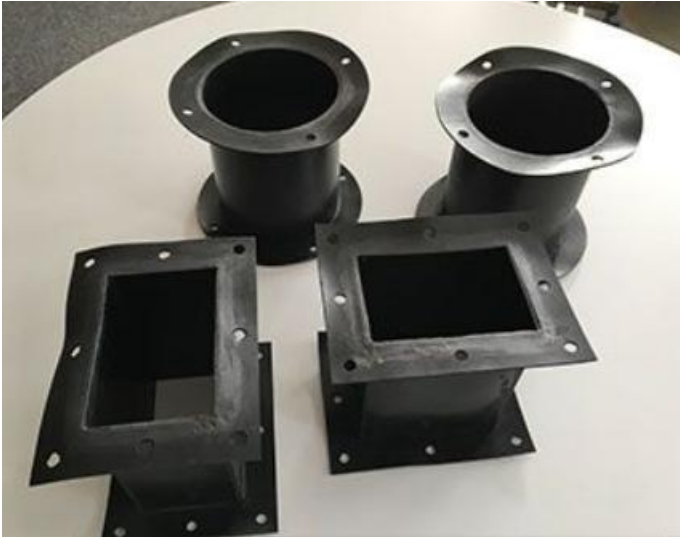
VAUTID®

Typical Applications



WEAR-RESISTANT RUBBER

Typical Applications



PIONEERING WEAR PROTECTION



“With our innovative spirit and 80 years of experience in wear protection, we develop leading system solutions in casting and welding technologies worldwide.”

