

**ORIENTAL**

CONVEY | ALL | THE | WAY

**HOT  
STUFF**

**MAX<sup>X</sup> SURYA<sup>®</sup>**  
Heat Resistant



**Product Feature:**

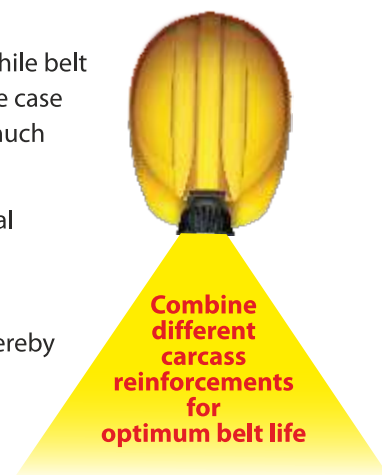
Several manufacturing processes involve heat generation or conveyance of hot material. While belt selection may be made on the basis of certain design criteria by the end users, it is often the case that due to process variables, the actual ambient conditions that belts are exposed to are much more than originally estimated.

Due to the severity of the operating environment and the intrinsic limitations in the material properties, belts tend to fail due to:

Cover hardening | Ply delamination | Belt deformation | Joint failure

Correct product selection is essential to ensure the continued uptime of a conveyor and thereby of the belt.

We have with our vast experience in Industrial applications put together a unique array of **MAXX SURYA®** belts for conveying your **Hot Stuff**

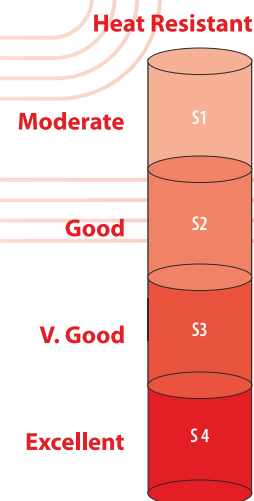


Oriental has given attention to offer superior heat resistant belts where the rubber compounds and the carcass reinforcements have been combined to address virtually every abusive application involving conveying of hot material.

**MAXX SURYA® Cover Grade Selection Chart**

Heat Resistant Cover Type	Type of Rubber	Product Characteristics	Working Temperature °C	Maximum Peak Temperature °C	Belt Surface Temperature °C	Minimum Tensile Strength (MPa)	Minimum Elongation at Break (%)	Maximum Abrasion Loss (mm <sup>3</sup> )	% Change in Tensile Strength and Elongation at Break after heat ageing at
MAXX SURYA 1	SBR / NR based	High Abrasion Resistance , suitable at low to medium temperature for carrying Coke, Lime Stone, Casting Sand etc.	80-100	120	60-100	15	450	150	100°C,72 hrs; -25%,-40%
MAXX SURYA 2	SBR based	Good Abrasion Resistance, suitable for medium temperature used to carry Coke, Lime Stone, Casting Sand etc.	80-125	150	60-125	15	450	150	125°C,72 hrs; -35%,-50%
MAXX SURYA 3	EPDM / SBR based	Extreme Heat Resistance, designed to carry hot load of material like Cement, Clinker, Lime Stone, Clay etc. This belt has non-cracking property.	80-150	180	60-150	15	450	150	125°C,168 hrs; -35%,-50%
MAXX SURYA 4	EPDM based	Extreme Heat Resistance, non hardening and non cracking, designed to handle Hot Sinter, Hot Clinker, Hot Chemicals, Phosphates, Fertilizers etc.	80-180	220	60-180	10	450	150	150°C,168 hrs; -40%,-55%

High Abrasion Resistant grades are also available on request



**Note:** For any specific cover grade requirement outside the chart, kindly contact Oriental's Technical service division

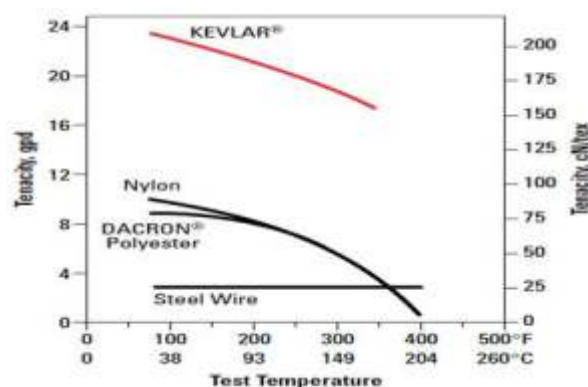
While conventional rubber covers had limited heat resistance, with the continuous evolution and development at Oriental, we have reached a stage where the rubber covers are capable of withstanding elevated temperatures of +200° C and resist cracking and hardening for a much longer period in operation.

This necessitated a relook at the thermal integrity of various reinforcement materials so that further improvements in this field would be undertaken.

**Carcass Types:**

It is a fact that most failures in high heat applications commence with rubber covers ageing prematurely and this is followed by fabric plies giving way. This is due to limitations in the thermal properties of conventional polyester and nylon fabrics which tend to soften and melt when the core of the belt reaches temperatures exceeding 150°C. At these temperatures there is a sharp drop in the strength of the belt and blow holes and joint failures are witnessed.

To address these challenges, the **MAXX SURYA®** belts are offered with the following carcass reinforcements  
 MAXX STEELFLEX™ | MAXX ARMOUR™ | MAXX ROCK® | EP/NN

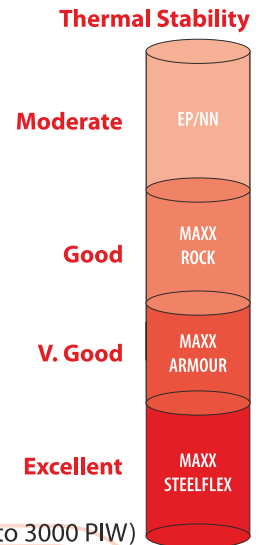


**MAXX SURYA®** has a wide range of Heat Resistant conveyor belts which we recommend depending not only on the thermal load on the belt, but also based on the following factors:

- Nature and composition of material
- Average and peak temperature of material to be conveyed
- Length of conveyor
- Rate of cooling of material
- Belt speed
- Surface temperature of material at discharge end
- Shape, size and coarseness of material
- Thickness of top cover

**Product Characteristics:**

Common Widths	: 500 mm to 2600 mm (20" to 102") for EP/NN 800 mm to 2400 mm (32" to 94") for ST
Carcass Variety Available	: EP /NN, MAXX ROCK®, MAXX ARMOUR™, MAXX STEELFLEX™
Common Belt Rating	: 200 to 3150 kN/m (110 to 1800 PIW)   ST500 to ST5400 kN/m (270 to 3000 PIW)
No. of Plies	: 2 ply to 7 ply
Rubber Cover Compounds	: Refer table for detailed properties
Rubber Cover Thickness	: 1.5 mm to 25 mm (1/16" to 1")
Edge	: Cut/Moulded Edge
Splicing Method	: Hot/Mechanical recommended
Belt Identification	: Unique Product Identification Number (PIN) at every 10 Mtr (33')

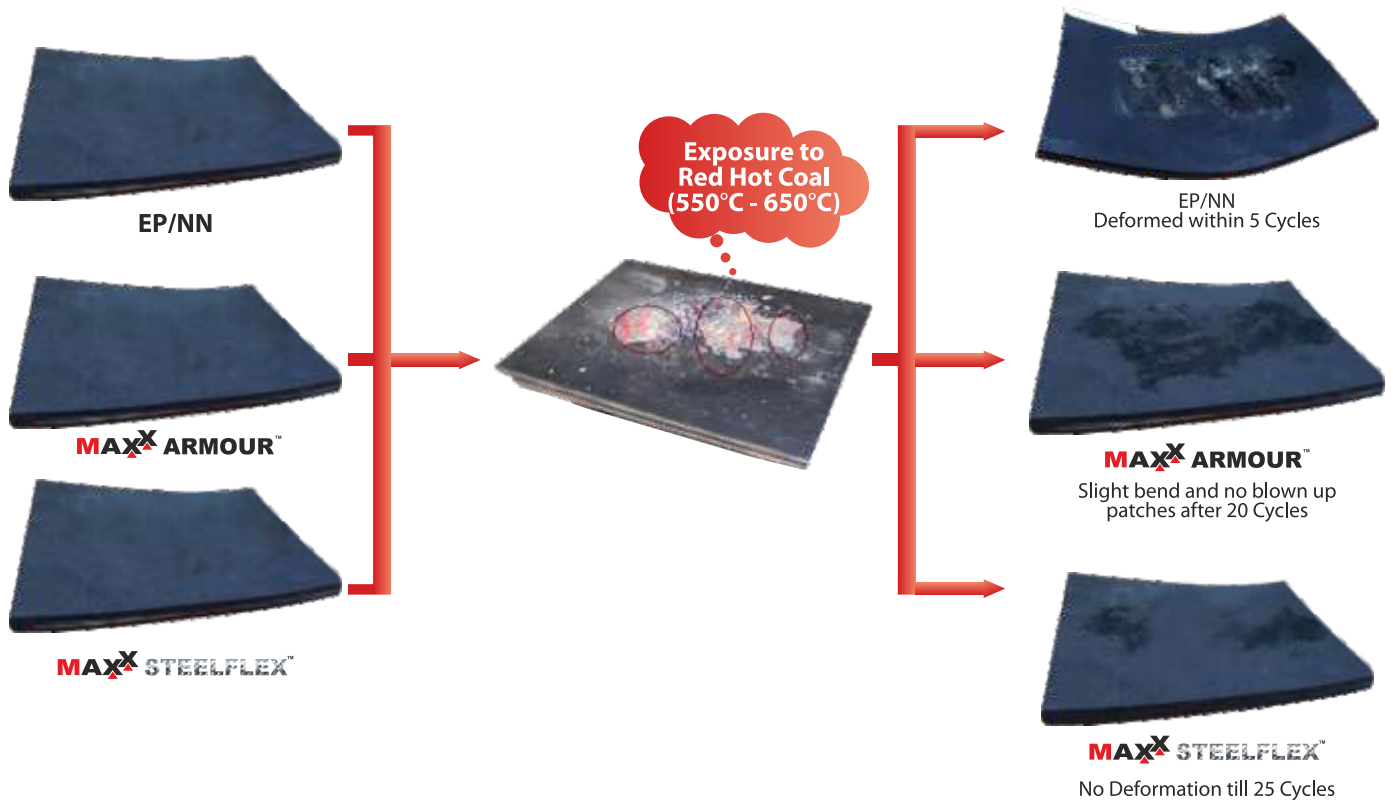


**Applications:**

**MAXX SURYA®** finds applications in the conveying of the following material

Clinker | Sinter | Fly ash | Asphalt/Hot mix | Metcoke | Foundry sand | Burnt Lime

**Coal Bed Test**





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Wear Resistant



Oil Resistant



Fire Resistant

**MAXX SURYA**<sup>®</sup>  
Heat Resistant

