



MIGHT
IS LIGHT

MAXX **ARMOUR**[™]
Aramid Belts

A conveyor belt made from DuPont® Kevlar® Fiber

The bulk material handling industry has relied on traditional products like steel cord and multiply textile belts, which due to their intrinsic properties, are unnecessarily bulky. This inhibits savings on capex and results in higher power consumption.

Technology has evolved. Our new generation, high strength, lightweight **MAXX ARMOUR™** belts now prove that Might is actually...Light !

Oriental has successfully introduced **MAXX ARMOUR™** conveyor belts made from DuPont™ Kevlar® reinforcement.

Kevlar® as is well known, is extensively used in bullet proof vests and ballistic armour and in more recent times has established it's superiority in industrial applications such as tires, hoses, transmission belts and conveyor belts.

MAXX ARMOUR™ range of conveyor belting solutions can perform in very demanding applications. The unique advantages of being heat and corrosion resistant, low creep properties, exceptionally high strength to weight ratio, chemical resistant and fire retardant differentiates it from other types.

MAXX ARMOUR™ range of conveyor belting solutions can be used for underground & overland applications at mines, ports, steel, cement and other industries for following applications:

Long Haul Conveyors | Pipe Conveyors | Feeder Conveyors | Stacker Reclaimers | Bucket Elevators

High strength & Light weight

5x stronger & 50% lighter!

ADVANTAGES

MAXX ARMOUR™ over Steel Cord Belts:

- Up to 50% reduction in belt weight for same strength class & upto 40% reduction in belt thickness
- Up to 15% energy saving in loaded condition & up to 30% saving in no load condition
- Superior rip, tear and impact resistance
- Similar growth & creep properties
- No corrosion, less maintenance, better tracking
- Potentially lower installation cost in case of new installations

MAXX ARMOUR™ over EP/NN Belts:

- Up to 30% reduction in belt weight with up to 40% reduction in thickness for same strength class
- Up to 15% energy saving in loaded condition & upto 30% saving in no load condition
- Lighter & thinner construction reduces number of splice
- Exceptional thermal stability, better chemical stability and better durability
- Significantly lower elongation compared to EP/NN belts resulting in lesser take-up requirement

Key Features of Kevlar® with Respect to other Reinforcement

Properties	Unit	DuPont™ Kevlar®	Nylon	Polyester	Steel	Remarks
Tenacity	dN/Tex	19.0	8.6	8.2	3.5	DuPont™ Kevlar® enables designers to develop a significantly lighter and thinner belt solution for the same strength class
Breaking Strength	N/mm ²	2760.0	990.0	1150.0	2600.0	
Modulus	kN/mm	259.0	5.5	13.8	175.0	
Elongation at Break	%	4.0	17.0	14.0	2.5	
Impact, Puncture and Rip Resistance	Qualitative	Excellent	Moderate	Moderate	Moderate	
Chemical and Corrosion Resistance	Qualitative	Excellent	Good	Moderate	Poor	
Heat Resistance	Qualitative	Excellent	Poor	Poor	Excellent	
Fire Resistance	Qualitative	Excellent	Poor	Poor	Excellent	DuPont™ Kevlar® does not melt or burn but chars on exposure to flame and prevents propagation of the fire

Belt comparison at minimum operating tension of 200 kN/m



Construction	ST 1400, 8+6	MA 1600/1, 8+3	EP 2000/4, 8+3
Conveyor Type	Steel Cord	MAXX ARMOUR™	MAXX TUFF™
Factor of Safety	6.7-7	8 - 9	10-12
Total Belt Thickness, mm	18.6	14	21
Belt Weight, kg/m ²	27.2	17	24
Relative Change in Weight wrt Steel (%)	0	-39	-14
Carcass Thickness, mm	4.6	4	10
Modulus N, mm ²	1,00,800	36,800	20,000
Drive Pulley Dia., mm	1000	500	1250
Snub Pulley Dia., mm	800	400	1000
Bend Pulley Dia., mm	630	315	800
Probability of corrosion	Yes	No	No
Puncture Resistance	Poor	Excellent	Moderate

Product Characteristics

Width	Upto 2100 mm (84"), higher widths available on request
Ply	Mono-ply
Belt Length Range	Upto 750 M/3.5 M Roll Diameter
Carcass Variety Available	Straight Warp made of DuPont™ Kevlar®
Belt Rating	Mono ply constructions in 500/1, 630/1, 800/1, 1000/1, 1250/1, 1600/1, 2000/1, 2500/1, 3150/1, 4000/1
Rubber Cover Compounds	Customized based on application
Top Cover Thickness	5mm & above
Bottom Cover Thickness	3mm & above
Edges	Cut / Moulded
Splicing Method	Hot Finger Splice / Oriental "O" Splice
Packing	Steel/Pallet/Wooden Drum
In accordance with DIN & Oriental standards	

MAXX ARMOUR™ product range and design properties

Belt Rating	Max. Operating Tension , kN/m	Carcass Thickness mm	Carcass Weight kg/m ²	Minimum Pulley Diameter, mm		
				Drive	Snub	Tail
MA 500	63	2.0	2.5	315	250	200
MA 630	80	2.2	3.0	315	250	200
MA 800	100	2.5	3.6	400	315	200
MA 1000	120	3.0	4.2	400	315	200
MA 1250	150	3.4	4.8	500	400	315
MA 1600	185	4.0	5.2	500	400	315
MA 1800	200	4.3	5.6	500	400	315
MA 2000	230	4.8	6.1	500	400	315
MA 2500	285	5.0	6.5	630	500	400
MA 3150	350	5.3	7.0	800	630	500
MA 3500	425	5.5	7.3	1000	800	630
MA 4000	450	5.8	7.6	1000	800	630

Belt Rating	Max. Belt Width for Load support with material weight in t/m ³				Minimum Belt Width for Troughing, mm		
	< 0.75	0.75 - 1.0	1.5 - 2.5	2.5 - 3.2	20°	35°	45°
MA 500	1200	1000	800	650	400	500	600
MA 630	1200	1000	800	650	400	500	600
MA 800	1400	1200	1000	800	500	600	750
MA 1000	1600	1400	1200	1000	500	600	750
MA 1250	1800	1600	1400	1200	600	750	900
MA 1600	1800	1600	1400	1200	600	750	900
MA 1800	1800	1600	1400	1200	600	750	900
MA 2000	1800	1600	1400	1200	600	750	900
MA 2500	2000	2000	1800	1600	800	900	1000
MA 3150	2000	2000	1800	1600	800	900	1000
MA 3500	2000	2000	1800	1600	900	1000	1100
MA 4000	2000	2000	1800	1600	1000	1100	1200

Contact us for queries related to underground, overland conveying solutions for mining, ports and other industries and for our special expertise in MAXX ROUND® and MAXX ARMOUR™:

National : marketing@orientalrubber.com **International** : exports@orientalrubber.com



Wear Resistant



Heat Resistant



Fire Resistant



Oil Resistant



Energy Saving

MAXX ARMOUR™
Aramid Belts

