



BUT WE EXTINGUISH IT





www.orientalrubber.com

Product Feature:

Mining and related industries are the prime drivers to the economy. It is therefore imperative as a part of the risk management for every installation, to assess, enable and assure the safety of the personnel and the installation. Studies have proven that in conveyors, the belt is an important component which requires due attention to address these risks.

The effect of a fire in an installation can be devastating in terms of losses. Conveyor belts are primarily composed of rubber and fabric, both components are known to be combustible and can contribute to the spread of fire. Thus, in case of a fire on an installation occurring due to the type of material, presence of flammable gases and a frictional or electrical event, the conveyor belt because it is moving, becomes a likely medium to propagate the fire.

In these circumstances, Oriental is in the forefront for developing and introducing fire resistant and retardant belts to mitigate different levels of risks. With the advancement in technology, it is excellent abrasion possible to impart properties to conveyor belts so that in fact the propagation of the fire is arrested or limited at the source. This is done by using a combination of polymers, chemicals and additives which contribute to improving the fire retardant properties of the conveyor belt. This can often be achieved without compromising the wear life of the conveyor belt as well.

In order to cater to varying levels of fire resistance and to comply with various domestic and international standards, Oriental has developed a range of fire resistant belts which we promote under the umbrella brand MAXX AGNI®. This range includes belts suited for underground use and specialized belts with low smoke and toxicity.

Our Fire

Resistant Belts

have

too!

MAXX AGNI® FR belts - WE DIDN'T START THE FIRE, BUT WE EXTINGUISH* IT

In areas where no fire risk was perceived earlier, we are observing an increased level of awareness and regulatory compliance. Applications where the material was not even considered hazardous (e.g. ores of platinum, chrome etc.), fire resistant belts are now being specified. In dock facilities carrying multiple commodities, similar acceptance is seen. The benefits of using MAXX AGNI[®] belts is tangible. Oriental manufactures the MAXX AGNI[®] belts in conformity to various international and national standards. Additionally, in line with the Oriental ethos to offer leading edge products, we have been continually introducing higher performing belts to the users - FROR, FRORHR, FRSAR, HFFR. (see table). The belts are offered with conventional EP/NN plied reinforcement as well as with MAXX ARMOUR™, MAXX ROCK® and MAXX STEELFLEX™

In our test facilities, we carry out extensive tests and R&D to remain in the forefront in this product segment.

Product application:

MAXX AGNI® belts are commonly used in handling coal over ground in Coal mines, Thermal power plants and in Underground coal mines. Fire Resistant belts are similarly used for conveying any other materials prone to ignition during use.

Industries:

Coal Mines Thermal Power Plants Ore Mines Ports Coal prep plants

Benefits of MAXX AGNI®:

- Reduces the risk of fire hazard and the potential loss of human life, material and installation
- MAXX AGNI[®] belts are Anti-Static
- Easy to splice

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	:	1 ply to 7 ply
Rubber Cover Compounds	:	Refer table for detailed properties

MAXX AGNI® Cover Grade Selection Chart

Fire Resistant Test compliance to Standard	Minimum Tensile Strength (MPa)	Minimum Elongation at Break (%)	Maximum Abrasion Loss (mm ³)	Application Characteristics	Reference Material	Fire Resistant
FR MSHA 2G	15	350	190	Moderate resistance to flame for over ground application	Coal, Grains, Ore etc.	
FR CAN - C	17	400	175		Coal Mines,	CAN CSA - C
FR DIN K	17	400	175	Good resistance to flame for over ground applications	Ore mines, Ports Thermal Power Plants, Coal Prep Plants	Good MSHA - 2 G
FR IS 1891	17	400	175	5 11		ISO 340 FRAS - F
FR 110	17	400	110	Good resistance to flame with high wear resistant for over ground applications	Handling Large Lumps of Coal and Other ores	V Good DINS
FR OR - CAN C	14	400	200	Good resistance to flame,	Det Calva Craina	V. GOOD
HR FR OR - CAN C	17	400	175	for over ground application	Pet Coke, Grains	
HFFR- CAN C	12.5	350	230	Halogen free low smoke good fire resistance belt for over ground applications	Coal conveying in presence of Gamma radiation based calorific value of Coal detection system	SANS F Excellent FRAS - AS 4606
FR - AS F	17	400	175	Very good resistance to flame,		
FR - DIN S	17	400	175	suitable for high risk over ground/low risk	Coal , Ore Mines	
FR - SANS 971:2003	17	400	175	underground application		
FR MSHA BELT (PART 14)	15	400	200	Excellent resistance to Flame	Underground	
FR - SANS 971:2013	15	400	170	underground mining	high Fire risk	
FR AS 4606:S	20	400	120	application	applications	
	Fire Resistant Test compliance to StandardFR MSHA 2GFR CAN - CFR DIN KFR 110FR 110FR OR - CAN CHR FR OR - CAN CHR FR OR - CAN CFR - DIN SFR - DIN SFR - DIN SFR - SANS 971:2003FR MSHA BELT (PART 14)FR AS 4606:S	Fire Resistant Test compliance to StandardMinimum Tensile Strength (MPa)FR MSHA 2G15FR CAN - C17FR DIN K17FR 11017FR OR - CAN C14HR FR OR - CAN C17FR - AS F17FR - DIN S17FR - DIN S17FR - SANS 971:201315FR - SANS 971:201315FR AS 4606:S20	Fire Resistant Test compliance to StandardMinimum Tensile Strength (MPa)Minimum Elongation at Break (%)FR MSHA 2G15350FR CAN - C17400FR DIN K17400FR 11017400FR OR - CAN C14400HR FR OR - CAN C17400HFFR- CAN C117400FR - AS F17400FR - DIN S17400FR - SANS 971:201315400FR - SANS 971:201315400FR - SANS 971:201320400	Fire Resistant Test compliance to StandardMinimum Tensile Strength (MPa)Minimum Biogram Break (%)Maximum Abrasion Loss (mm³)FR MSHA 2G15350190FR CAN - C17400175FR DIN K17400175FR DIN K17400175FR 11017400175FR 110117400200HR FR OR - CAN C14400200HR FR OR - CAN C112350230FR - DIN S117400175FR - DIN S117400175FR - DIN S117400175FR - SANS 971:200317400175FR - SANS 971:201315400170FR AS 4606:S20400120	Fire Resistant Test compliance to StandardMinimum Tensile Strength (MPa)Minimum Elongation at Break (%)Maximum Abrasion Loss (mm*)Application CharacteristicsFR MSHA 2G15350190Moderate resistance to flame for over ground applicationFR CAN - C17400175FR DIN K17400175FR IS 189117400175FR 100177400175FR CAN - C14400200FR OR - CAN C14400200HR FR OR - CAN C17400175FR OR - CAN C17400175HR FR OR - CAN C17400175HR FR OR - CAN C17400175FR - AS F17400175FR - AS F17400175FR - AS F17400175FR - AS F17400175FR - SANS 971:200317400175FR MSHA BELT (PART 14)15400200FR AS 4606:S20400120FR AS 4606:S20400120	Fire Resistant Test compliance to StandardMinimum Tensile at Break (%)Maximum Abrasion Loss (mm)Application CharacteristicsReference MaterialFR MSHA 2G15350190Moderate resistance to flame for over ground applicationCoal, Grains, Ore etc.FR CAN - C17400175Good resistance to flame for over ground applicationsCoal, Grains, Ore etc.FR CAN - C17400175Good resistance to flame for over ground applicationsCoal Mines, Ore mines, Ports Thermal Power Plants, Coal Prep PlantsFR IS 189117400175Good resistance to flame with high wear resistant for over ground applicationsHandling Large Lumps of Coal and Other oresFR OR - CAN C14400200Good resistance to flame, moderate Dil and Heat for over ground applicationsPet Coke, Grains radiation basedHR FR OR - CAN C117400175Coal conveying in presence of Gamma radiation based over ground applicationsPet Coke, Grains radiation based calorific value of coal detection systemFR - AS F17400175Very good resistance to flame, suitable for high risk over ground/low risk underground applicationCoal, ore Mines, radiation based calorific value of coal detection systemFR - SANS 971:200317400175Excellent resistance to Flame, propagation, suitable for underground applicationCoal, ore Mines radiation based calorific value of coal detection systemFR MSHA BELT (PART 14)1

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

Rubber Covers Thicknes Edge Splicing Method

Rubber Covers Thickness : 1.5 mm to 25 mm (1/16" to 1")

: Cut/Moulded Edge

: Hot/ Cold/ Mechanical

: Unique Product Identification Number (PIN) at every 10 Mtr (33')

MAXX AGNI®

Belt Identification

These belts are recommended for use in coal and such types of mines where the ambient temperature may not be high but there is a distinct hazard of the belts being enveloped in fire. Rubber covers are Fire Resistant and Antistatic.

Oriental **MAXX AGNI**[®] range of belts are complying or have certification for major Fire resistant standards across markets like:

Title CFR 30, Part 14 of the MSHA (Mines Safety and Health Administration), USAFRAS S as per AS 4606:2012SANS 971:2013DIN 22103EN ISO 14973:2006IS 1891: Part 5CAN CSA M422-12





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Wear Resistant



Oil Resistant Energy Saving



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