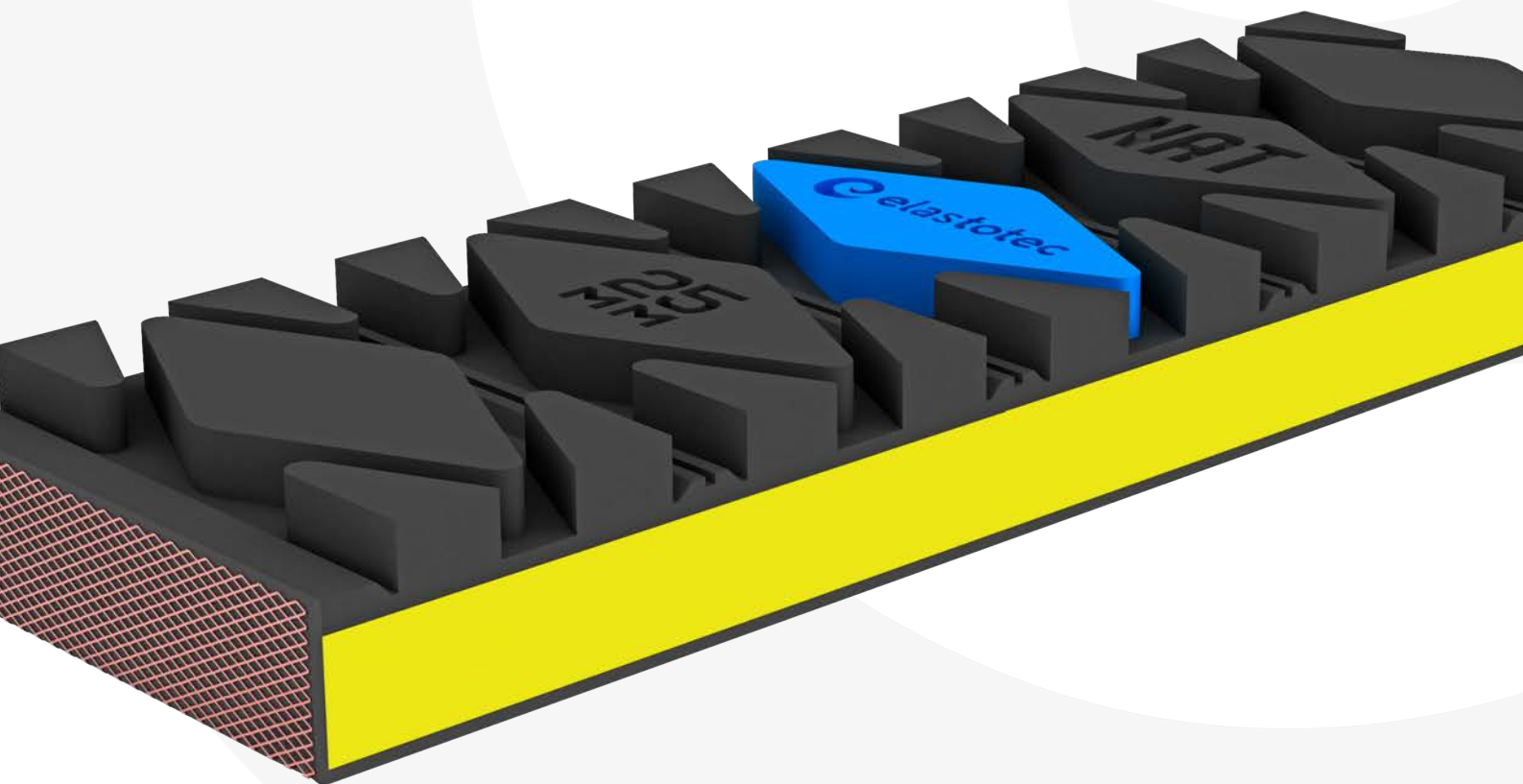


# WEAR INDICATOR RUBBER LAGGING

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 **elastotec**  
ENGINEERED TO PERFORM



## WEAR INDICATOR RUBBER LAGGING



### DESCRIPTION

Wear Indicator Rubber Lagging is popular having a visual indication on when the lagging needs to be scheduled for replacement.

Elastotec Wear Indicator Rubber Lagging has been developed to provide mining companies with a long life lagging that will provide a visual indication when the abrasion resistant lagging has been worn away and the lagging should be scheduled for replacement. The coloured wear indicator layer is designed to indicate when the lagging replacement is required and to also provide protection for the pulley shell while lagging replacement is scheduled.



### APPLICATION

The primary aim is to prevent wear of the pulley shell that may lead to the need for an expensive replacement of the whole pulley. Many mines spend considerable time measuring the thickness of the lagging on the pulleys once in service to keep track of replacement requirements. This normally involves operators using ultrasound techniques on the pulley surface during shutdowns to record the remaining thickness of the lagging. A visual alarm while conveyor is running reduces likelihood of pulley shell wear as well as maintenance hours for lagging control.

## WEAR INDICATOR RUBBER LAGGING



### KEY FEATURES AND BENEFITS

- ✓ Rubber backing developed in conjunction with ARDL (Akron Rubber Development Laboratory) to retain flexibility at low temperature (-50°C).
- ✓ High performance abrasion resistant synthetic elastomer.
- ✓ Coloured wear indicator layer below abrasion resistant layer.
- ✓ Proven bonding system between abrasion resistant synthetic elastomer and CN backing coloured rubber.
- ✓ Coloured wear indicator (Blue for SBR and Red for FRAS).
- ✓ High quality rubber formulations designed for good bonding, resistance to degradation by outdoor exposure, and good abrasion resistance.
- ✓ To be applied though hot vulcanising method to eliminate the chance of lagging debonding from pulley shell and separation on joins.
- ✓ Can be supplied in a range of thicknesses (15, 20 and 25mm).
- ✓ Suitable for long term service at temperatures from -40°C to +70°C.



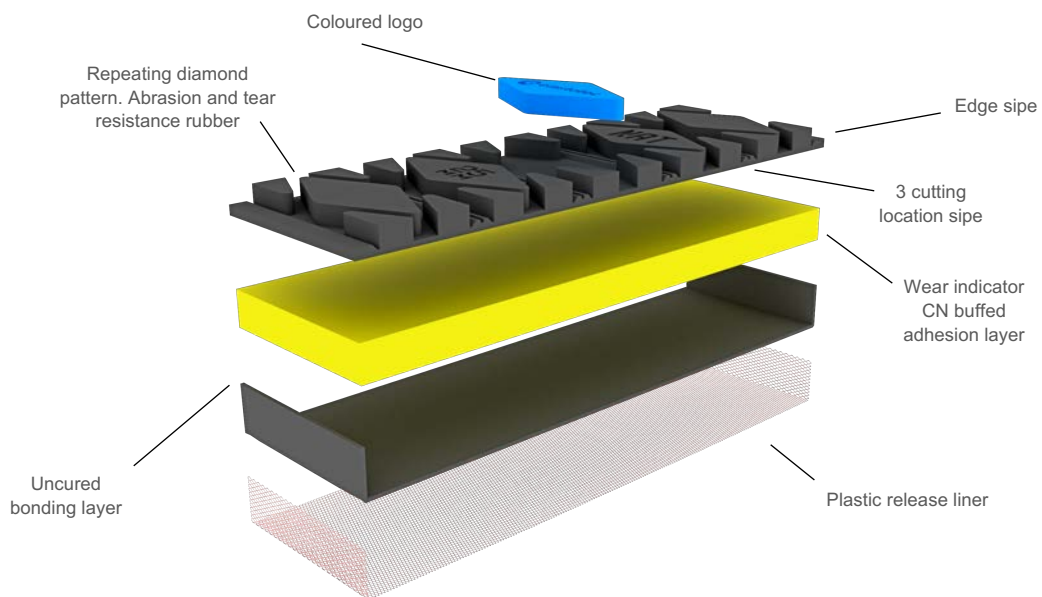
**WEAR INDICATOR RUBBER LAGGING**



Elastotec Wear Indicator Rubber Lagging has a bottom coloured rubber layer to indicate the need for lagging replacement

Simple system that provides an easy to recognize visual indicator that the abrasion resistant diamond lagging layer has worn through and should be scheduled for replacement. Provides a margin of safety by identifying wear before contact / damage to the pulley shell occurs.

**HOT VULCANISED**



**WEAR INDICATOR RUBBER LAGGING**

**RUBBER SPECIFICATIONS**

*Typical values*

	NAT	FRAS
Polymer	SBR	Blend
Tensile strength (MPa) min ISO37	18.0	16.0
% Elongation min ISO37	550%	500%
Hardness (shore A) ISO868	65+/-5	65+/-5
Abrasion resistance max vol. loss ISO 4649 method A (non-rotating)	70mm <sup>3</sup>	150mm <sup>3</sup>
FRAS - MDG3608 and MSHA Standards	N/A	PASS/ACCEPTED
Heat ageing (Property change after 70°C 168hs)	Tensile strength +1% Elongation -15% Hardness 5 points	Tensile strength +5% Elongation -1% Hardness 3 points
Continuous operating temperature	-40/+70°C	-40/+70°C



## WEAR INDICATOR RUBBER LAGGING

**Elastotec lagging can be applied to pulleys by cold bonding or by hot vulcanisation.**

### ELASTOTEC COLD BONDING RUBBER LAGGING

Elastotec Cold Bonding Rubber Lagging has the CN buffed bonding layer packed in plastic to protect and keep it fresh and free from contamination until application to the pulley.

A rubber tear bond is achieved by using Elastotec Metal Primer 2205 and Elastotec Cold Bonding Adhesive to chemically interlock with the CN bonding layer, making a strong interface between the layers.

An Elastotec approved applicator using the Elastotec application procedure will achieve reliable adhesion levels that exceed the 9 N/mm industry standard and are typically at 12 N/mm.



### ELASTOTEC HOT VULCANISING RUBBER LAGGING

Elastotec Hot Vulcanising Rubber Lagging has a 1.2mm thick uncured rubber layer applied to the back and sides of the lagging.

Hot Vulcanising Lagging is supplied packed in plastic to protect and keep the uncured bonding layer fresh and free from contamination until application to the pulley.

Application by a trained Elastotec approved applicator using the Elastotec application procedures will guarantee a 100% rubber tear bond between the lagging and the pulley shell with typical adhesion values exceeding 20 N/mm.





**WEAR INDICATOR RUBBER LAGGING**

**LAGGING SPECIFICATIONS – WEAR INDICATOR LAGGING**

**HOT VULCANISED – NAT  
DIMENSIONS**

PRODUCT	CODE	WIDTH	THICKNESS	LENGTH	WEIGHT/lm
Wear Indicator Lagging 15mm	ELA-WI-DIA-N-15V	251mm-255mm	16mm-17.2mm	9.7m	6.50kg
Wear Indicator Lagging 20mm	ELA-WI-DIA-N-20V	251mm-255mm	16mm-17.2mm	9.7m	8.32kg
Wear Indicator Lagging 25mm	ELA-WI-DIA-N-25V	251mm-255mm	26mm-27.2mm	9.7m	10.32kg

Product code for different lengths: Add 5-digit number indicating length in mm.  
Strip length to always be 100mm longer than face width to allow overhang for trimming after application.

**Example:**

Roll: 25mm 9.7m roll hot vulcanised product code: ELA-WI-DIA-N-20V-09700

Strip: 15mm hot vulcanising 1.2m strip length product code: ELA-WI-DIA-N-15V-01200

Thickness variation (all strips/pulley) +/-0.5mm

Ceramic lagging with thickness > 15mm only recommended for pulleys with diameters over 600mm.



## WEAR INDICATOR RUBBER LAGGING



### STORAGE

#### STORAGE RECOMMENDATIONS

- Stock usage based on a first-in first-out method (FIFO).
- The storage room for lagging must be cool, dry and dust-free.
- Avoid storage places near sources of ozone generating equipment.
- Do not store outside.
- Avoid storage in direct sunlight and strong artificial light as UV light can damage the products and may lead to a premature ageing.
- Under no circumstances should fuels, lubricants, acids, disinfectants, solvents or other chemicals be stored in the same storage area.
- Keep the storage place clean. Protect the material from dust, water etc. with suitable coverings.
- Allow 24 hours before use when lagging is removed from cold storage.

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#### SHELF LIFE

##### COLD BONDING LAGGING AND WEAR PANELS

- Stored <25°C 3 years shelf life
- Light buffing of bonding surfaces is recommended if over 4 months from production date

##### HOT VULCANISED LAGGING AND WEAR PANELS

- <7°C and away from UV and ozone generating equipment 12 months. Products stored for longer than 6 months will need to be re-tested for adhesion before being used, and the recommended shelf life is 12 months.

##### ADHESIVES AND PRIMERS


- Store in flammable goods cabinet
- Stored <25°C
- Shelf life:
  - Primers: 2 years
  - Cold bonding adhesive: 2 years
  - Hot vulcanising adhesive: 12 months
  - Direct bond adhesive: 2 years


Products stored under the above conditions for longer periods of time than recommended need to be re-tested for adhesion before being used.





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