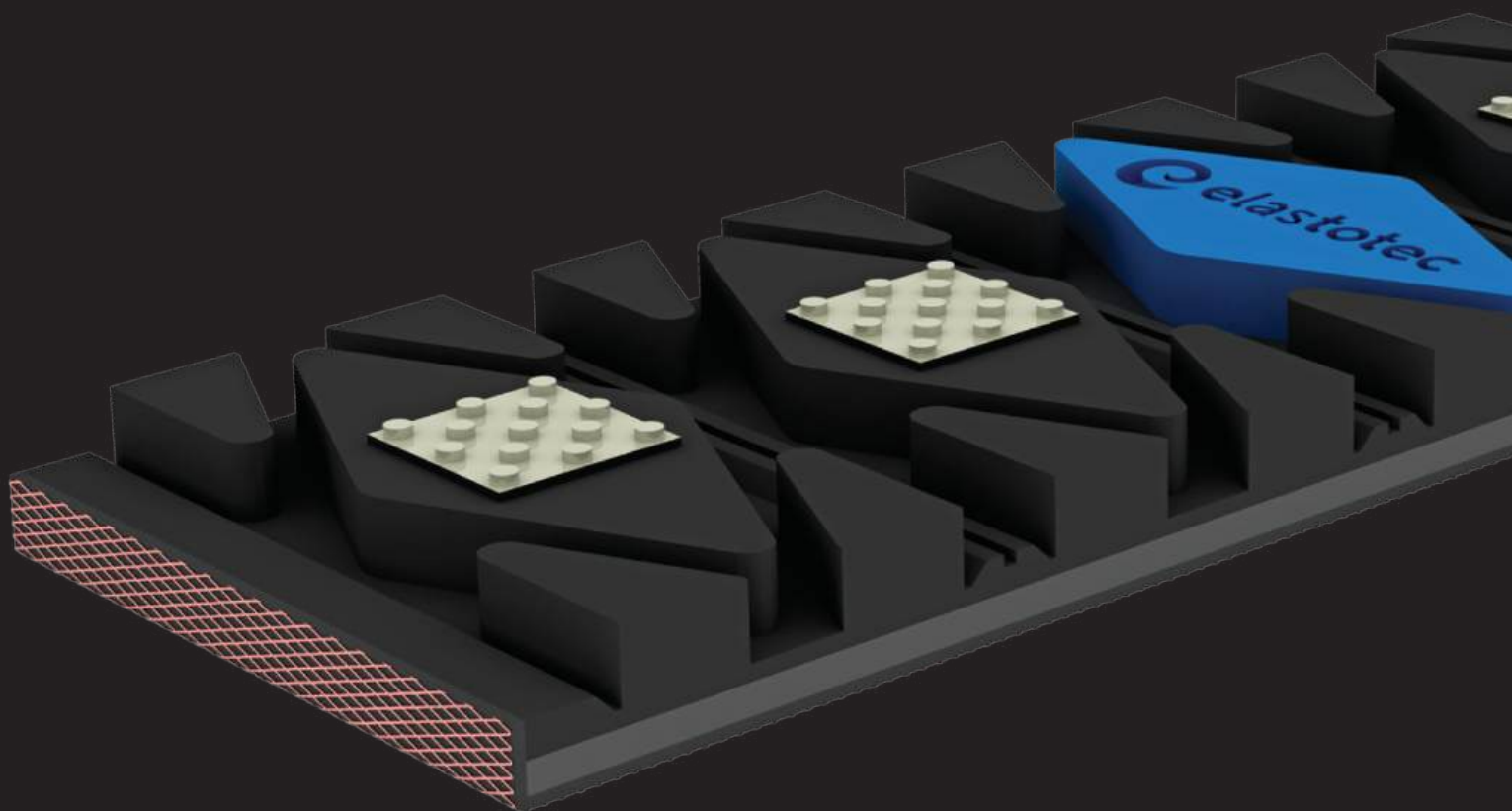




# Diamond 15% Ceramic Lagging



Engineered to Perform

Elastotec Diamond 15% Ceramic Lagging is designed to provide additional grip in low to medium tension drive applications where existing rubber lagging is experiencing problems due to slippage. **Compatible with low tension flexible fabric belts.**

A single aluminium oxide tile is bonded into each large diamond and the raised dimples engage with the belt cover under tension and provide increased grip on drives while smooth ceramic tiles providing wear resistance on non drives.

**Elastotec Diamond 15% Ceramic Lagging has 15% ceramic coverage.**

## Application

Elastotec Diamond 15% Ceramic Lagging is designed for use in low to medium belt tension applications and can be applied to conveyor drive, or non drive pulleys.

It is used for conveyor system applications in the mining, quarrying, mineral and metal processing industries but can be used on any conveyor pulley.

## Key Features and Benefits

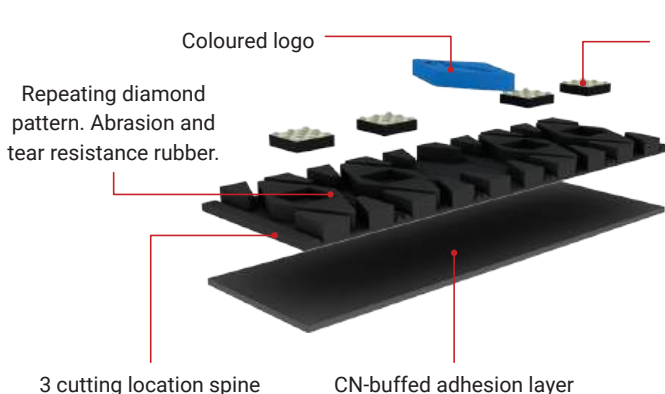
- On drive pulleys: Increased grip and traction for applications where Rubber Lagging is experiencing slippage. Tiles with dimples to be used on drive pulleys.
- On non drive pulleys: Increased abrasion resistance when rubber abrasion resistance is not providing enough service life. Smooth tiles to be used on non drive pulleys
- Suitable for low tension applications.**
- Recommended for flexible fabric belts.**
- Flexibility of the lagging due to grooving design and low ceramic coverage allows lagging to keep engagement with low/medium tension flexible belts and is good for material shedding due to contracting and expanding when going around the pulley face.**
- Not recommended for stiff high tension steel cord belts. Low ceramic coverage can cause high localised stresses. Flexibility of the lagging when exposed to high stresses is prone to fatigue due to cyclic deformation of lagging.



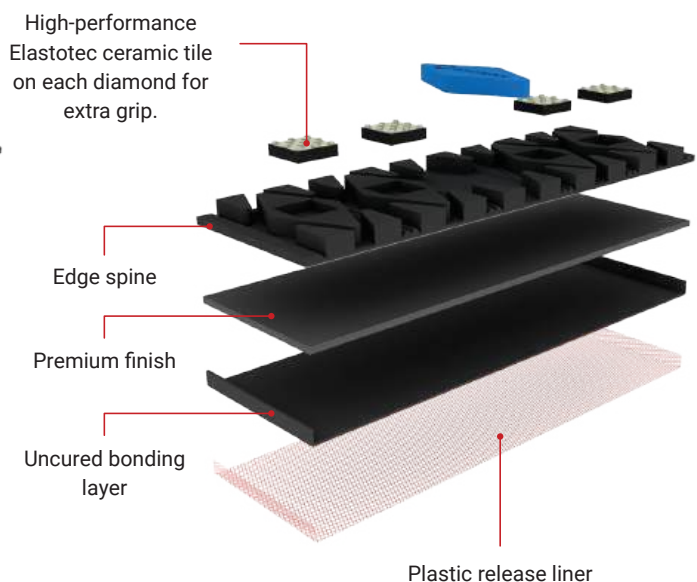
# Design

- Available in 250mm wide strips or long rolls that can be cut to suit any pulley size and make it easy to install.
- Available in highly abrasion resistant SBR for above ground applications and FRAS for underground and high-risk applications. Coloured insert (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.
- Suitable for cold and hot vulcanising applications**
- For cold bond applications: Buffed CN Bonding layer for increased adhesion.
- For hot vulcanising applications: moulded strip with an 1.2mm uncured bonding layer to back and sides suitable for hot vulcanising onto pulley shell.
- High quality ceramic tiles with Aluminium oxide content typical value 95%.
- No tile debonding from the rubber backing.
- Can be supplied with dimple tiles for drive applications or smooth tiles for non drive applications.**
- Can be supplied in a range of thicknesses (12,15 and 20mm).
- Suitable for long term service at temperatures from - 40°C to +70°C.

## COLD BONDED



## HOT VULCANISED



## Rubber Specifications

Typical values

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 70hs)	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

## Ceramic Specifications

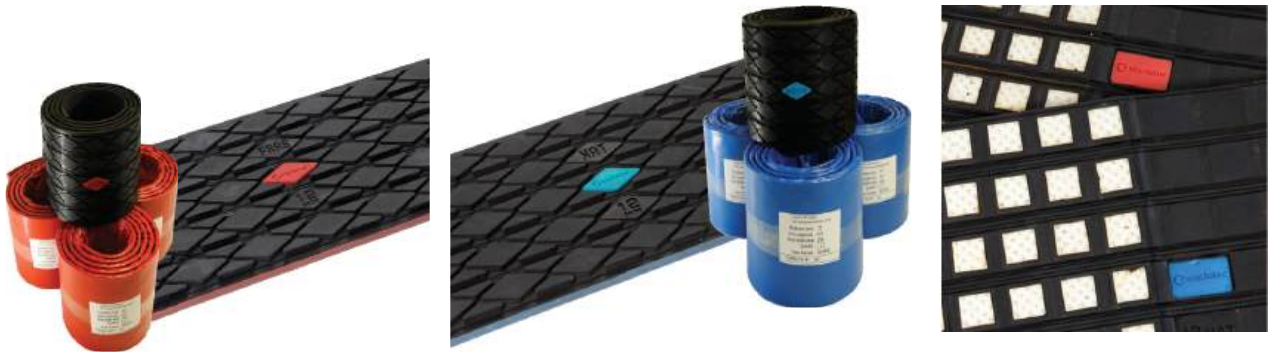
Typical values

Aluminium oxide	95%
Specific gravity g/cm <sup>3</sup>	3.7
Vickers hardness HV (10)	1000 plus
Flexural strength (Mpa)	300



## NAT AND FRAS

Elastotec Rubber and Ceramic Laggings are available in both SBR (NAT) and FRAS approved compounds. FRAS lagging is MDG3608 certified and MSHA accepted, made of a fire resistant and antistatic compound that is primarily used in applications where there is a risk of fire and/or explosion as a safety precaution. These applications include underground coal mines, power stations, grain handling facilities and sugar terminals. Elastotec uses blue coloured inserts to identify SBR (NAT) rubber products and red coloured inserts to identify FRAS rubber products.



## ELASTOTEC LAGGING CAN BE APPLIED TO PULLEYS BY COLD BONDING OR BY HOT VULCANISATION.

### ELASTOTEC COLD BOND LAGGING

Elastotec Cold Bonding Rubber Lagging has the CNbuffed 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 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.



## LAGGING SPECIFICATIONS – DIAMOND 15% CERAMIC LAGGING

### COLD BONDED – NAT

#### DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Diamond Ceramic Lagging 12mm	ELA-DIA15-N-12K-SQ	250mm-252mm	12.0mm-13.0mm	60.0m	4.30kg
Diamond Ceramic Lagging 15mm	ELA-DIA15-N-15K-SQ	250mm-252mm	15.0mm-16.0mm	48.5m	5.40kg
Diamond Ceramic Lagging 20mm	ELA-DIA15-N-20K-SQ	250mm-252mm	20.0mm -21.0mm	38.8m	7.30kg

#### DIMENSIONS PLAIN TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Diamond Ceramic Lagging 12mm	ELA-DIA15-N-12P-SQ	250mm-252mm	12.0mm-13.0mm	60.0m	4.60kg
Diamond Ceramic Lagging 15mm	ELA-DIA15-N-15P-SQ	250mm-252mm	15.0mm-16.0mm	48.5m	5.60kg
Diamond Ceramic Lagging 20mm	ELA-DIA15-N-20P-SQ	250mm-252mm	20.0mm -21.0mm	38.8m	7.50kg

### COLD BONDED – FRAS

#### DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Diamond Ceramic Lagging 12mm	ELA-DIA15-F-12K-SQ	250mm-252mm	12.0mm-13.0mm	60.0m	4.50kg
Diamond Ceramic Lagging 15mm	ELA-DIA15-F-15K-SQ	250mm-252mm	15.0mm-16.0mm	48.5m	6.60kg
Diamond Ceramic Lagging 20mm	ELA-DIA15-F-20K-SQ	250mm-252mm	20.0mm -21.0mm	38.8m	7.50kg

#### DIMENSIONS PLAIN TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Diamond Ceramic Lagging 12mm	ELA-DIA15-F-12K-SQ	250mm-252mm	12.0mm-13.0mm	60.0m	4.70kg
Diamond Ceramic Lagging 15mm	ELA-DIA15-F-15K-SQ	250mm-252mm	15.0mm-16.0mm	48.5m	6.80kg
Diamond Ceramic Lagging 20mm	ELA-DIA15-F-20K-SQ	250mm-252mm	20.0mm -21.0mm	38.8m	7.70kg

## LAGGING SPECIFICATIONS – DIAMOND 15% CERAMIC LAGGING

### HOT VULCANISED – NAT

#### DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Diamond Ceramic Lagging 12mm	ELA-DIA15-N-12KV-SQ	252mm-255mm	13.2mm-14.6mm	9.7m	5.40kg
Diamond Ceramic Lagging 15mm	ELA-DIA15-N-15KV-SQ	252mm-255mm	16.2mm-17.6mm	9.7m	6.50kg
Diamond Ceramic Lagging 20mm	ELA-DIA15-N-20KV-SQ	252mm-255mm	21.2mm - 22.6mm	9.7m	8.30kg

#### DIMENSIONS PLAIN TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Diamond Ceramic Lagging 12mm	ELA-DIA15-N-12PV-SQ	252mm-255mm	13.2mm-14.6mm	9.7m	5.60kg
Diamond Ceramic Lagging 15mm	ELA-DIA15-N-15PV-SQ	252mm-255mm	16.2mm-17.6mm	9.7m	6.70kg
Diamond Ceramic Lagging 20mm	ELA-DIA15-N-20PV-SQ	252mm-255mm	21.2mm - 22.6mm	9.7m	8.50kg

### HOT VULCANISED – FRAS

#### DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Diamond Ceramic Lagging 12mm	ELA-DIA15-F-12KV-SQ	252mm-255mm	13.2mm-14.6mm	9.7m	5.80kg
Diamond Ceramic Lagging 15mm	ELA-DIA15-F-15KV-SQ	252mm-255mm	16.2mm-17.6mm	9.7m	6.90kg
Diamond Ceramic Lagging 20mm	ELA-DIA15-F-20KV-SQ	252mm-255mm	21.2mm - 22.6mm	9.7m	8.80kg

#### DIMENSIONS PLAIN TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Diamond Ceramic Lagging 12mm	ELA-DIA15-F-12PV-SQ	252mm-255mm	13.2mm-14.6mm	9.7m	6.00kg
Diamond Ceramic Lagging 15mm	ELA-DIA15-F-15PV-SQ	252mm-255mm	16.2mm-17.6mm	9.7m	7.10kg
Diamond Ceramic Lagging 20mm	ELA-DIA15-F-20PV-SQ	252mm-255mm	21.2mm - 22.6mm	9.7m	9.00kg

Product code for different lengths:  
Add 5-digit number indicating length in mm.

Example:









Roll: 12mm cold bonded 60m roll product  
code: ELA-DIA15-N-12K-60000

Strip: 15mm hot vulcanized 1.2m strip length product  
code: ELA-DIA15-N-15KV-01200

Recommendation for lagging thicknesses suitability for pulley diameters:



12mm, for pulley diameters 350mm and larger  
15mm, for pulley diameters 600mm and larger  
20mm, for pulley diameters 1000mm and larger

# 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 candamage 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.

# 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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