# FULL 80% CERAMIC LAGGING

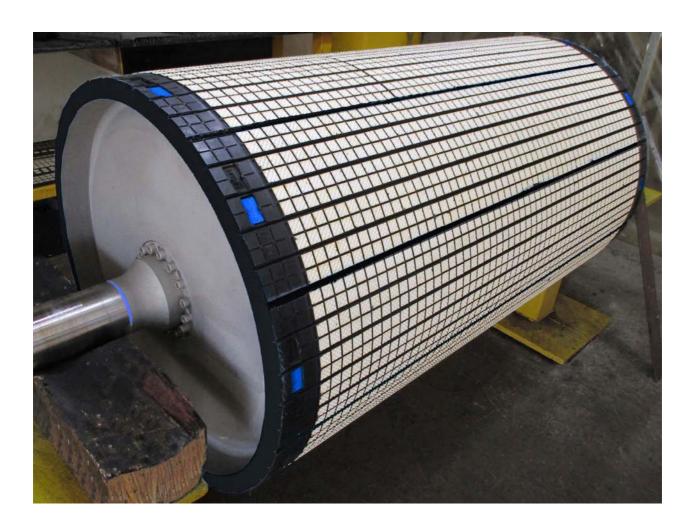




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Version 20240314

## FULL 80% CERAMIC LAGGING





Elastotec Full 80% Ceramic Lagging is designed to provide an increased coverage of 80% aluminum oxide tiles.

The increased tile coverage reduces the shear stress between the lagging and the bottom cover of the belt and also protects the rubber backing from physical damage and wear.



Elastotec Full 80% Ceramic Lagging is designed for high tension belt application and can be applied to conveyor drive, tail, snub, bend or take-up pulleys. It is used for conveyor system applications in the mining industry but can be used on any conveyor pulley



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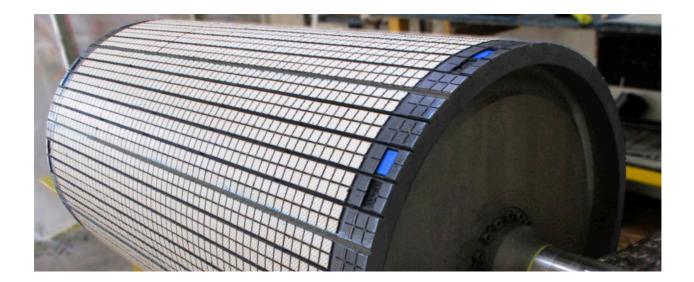
# FULL 80% CERAMIC LAGGING



# **KEY FEATURES AND BENEFITS**

- Increased grip and traction for applications where rubber lagging is experiencing slippage.
- Maximum ceramic coverage protects the surface from physical damage.
- Rubber layer between all tiles sides to provide cushioning and reduce the risk of tile cracking and damage.
- Available in 250mm wide rolls that can be cut to suit any pulley size and make it easy to install
- Available in SBR for above ground applications and FRAS for underground and high-risk applications.
- High quality rubber formulations designed for good bonding, resistance to degradation by outdoor exposure, and good abrasion resistance.
- ✓ Buffed CN Bonding layer for increased adhesion.
- Available with uncured bonding layer for Hot Vulcanised application.
- 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.
- No tile debonding from the rubber backing.
- Increased tile coverage reduces shear stress between the lagging and the bottom belt cover.

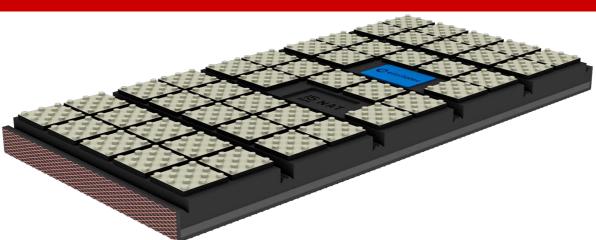






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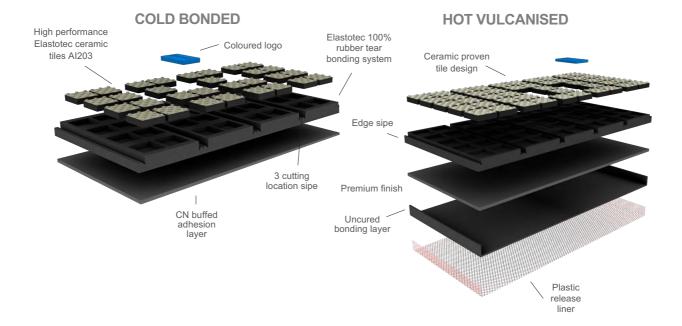
## FULL 80% CERAMIC LAGGING





Elastotec Full 80% Ceramic Lagging reduces shear stress on tiles reducing the risk of tile pull out.

Tiles are bonded to rubber on 5 sides to ensure maximum tile to rubber adhesion strength and reduce the risk of breakage.





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FULL 80% CERAMIC 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	

# **CERAMIC SPECIFICATIONS**

Typical values

Aluminium oxide	96%
Specific gravity g/cm3	3.7
Vickers hardness HV (10)	1000 plus
Flexural strength (Mpa)	300
Compressive strength (Mpa)	1800
Fracture Toughness (Mpa m1/2)	3.5





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## FULL 80% CERAMIC LAGGING

# 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 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.

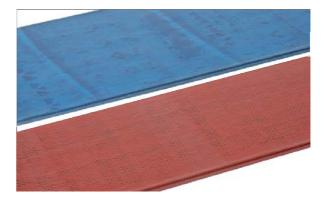


## ELASTOTEC HOT VULCANISING RUBBER LAGGING

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.





## FULL 80% CERAMIC LAGGING

# LAGGING SPECIFICATIONS - COLD BONDED 80% CERAMIC LAGGING

#### **COLD BONDED – NAT**

#### DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	LENGTH	WEIGHT/Im
80% Ceramic Lagging 12mm	ELA-DRC80-N-12K	250mm-252mm	11.5mm-12.5mm	58.2m	5.88kg
80% Ceramic Lagging 15mm	ELA-DRC80-N-15K	250mm-252mm	15mm-16mm	48.5m	6.53kg
80% Ceramic Lagging 20mm	ELA-DRC80-N-20K	250mm-252mm	19mm-20mm	38.8m	6.92kg

#### DIMENSIONS PLAIN TILES

PRODUCT	CODE	WIDTH	THICKNESS	LENGTH	WEIGHT/Im
80% Ceramic Lagging 12mm	ELA-DRC80-N-12P	250mm-252mm	11.5mm-12.5mm	58.2m	6.33kg
80% Ceramic Lagging 15mm	ELA-DRC80-N-15P	250mm-252mm	15mm-16mm	48.5m	6.98kg
80% Ceramic Lagging 20mm	ELA-DRC80-N-20P	250mm-252mm	19mm-20mm	38.8m	7.37kg

# COLD BONDED – FRAS

## DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	LENGTH	WEIGHT/Im
80% Ceramic Lagging 12mm	ELA-DRC80-F-12K	250mm-252mm	11.5mm-12.5mm	58.2m	6.08kg
80% Ceramic Lagging 15mm	ELA-DRC80-F-15K	250mm-252mm	15mm-16mm	48.5m	6.38kg
80% Ceramic Lagging 20mm	ELA-DRC80-F-20K	250mm-252mm	19mm-20mm	38.8m	7.18kg

## DIMENSIONS PLAIN TILES

PRODUCT	CODE	WIDTH	THICKNESS	LENGTH	WEIGHT/Im
80% Ceramic Lagging 12mm	ELA-DRC80-F-12P	250mm-252mm	11.5mm-12.5mm	58.2m	6.51kg
80% Ceramic Lagging 15mm	ELA-DRC80-F-15P	250mm-252mm	15mm-16mm	48.5m	6.81kg
80% Ceramic Lagging 20mm	ELA-DRC80-F-20P	250mm-252mm	19mm-20mm	38.8m	7.61kg

Product code for different strip lengths:

Add 5-digit number indicating ceramic length in mm.

Strip: 15mm thick cold bonded, NAT, 1.2m ceramic length product code: ELA-DRC80-N-15K-01200

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

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





# FULL 80% CERAMIC LAGGING

# LAGGING SPECIFICATIONS - HOT VULCANISED 80% CERAMIC LAGGING

#### HOT VULCANISED - NAT

#### **DIMENSIONS DIMPLE TILES**

PRODUCT	CODE	WIDTH	THICKNESS	LENGTH	WEIGHT/Im
80% Ceramic Lagging 12mm	ELA-DRC80-N-12KV	250mm-252mm	12.5mm-13.7mm	_	5.88kg
80% Ceramic Lagging 15mm	ELA-DRC80-N-15KV	250mm-252mm	16mm-17.2mm	_	6.53kg
80% Ceramic Lagging 20mm	ELA-DRC80-N-20KV	250mm-252mm	21mm-22.2mm	_	6.92kg

#### **DIMENSIONS PLAIN TILES**

PRODUCT	CODE	WIDTH	THICKNESS	LENGTH	WEIGHT/Im
80% Ceramic Lagging 12mm	ELA-DRC80-N-12PV	251mm-255mm	13mm-14.2mm	_	6.33kg
80% Ceramic Lagging 15mm	ELA-DRC80-N-15PV	251mm-255mm	16mm-17.2mm	_	6.98kg
80% Ceramic Lagging 20mm	ELA-DRC80-N-20PV	251mm-255mm	21mm-22.2mm	_	7.37kg

# HOT VULCANISED – FRAS

## DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	LENGTH	WEIGHT/Im
80% Ceramic Lagging 12mm	ELA-DRC80-F-12KV	250mm-252mm	12.5mm-13.7mm	-	6.08kg
80% Ceramic Lagging 15mm	ELA-DRC80-F-15KV	250mm-252mm	16mm-17.2mm	_	6.38kg
80% Ceramic Lagging 20mm	ELA-DRC80-F-20KV	250mm-252mm	21mm-22.2mm	_	7.18kg

## DIMENSIONS PLAIN TILES

PRODUCT	CODE	WIDTH	THICKNESS	LENGTH	WEIGHT/Im
80% Ceramic Lagging 12mm	ELA-DRC80-F-12PV	251mm-255mm	13mm-14.2mm	_	6.51kg
80% Ceramic Lagging 15mm	ELA-DRC80-F-15PV	251mm-255mm	16mm-17.2mm	_	6.81kg
80% Ceramic Lagging 20mm	ELA-DRC80-F-20PV	251mm-255mm	21mm-22.2mm	_	7.61kg

The 80% Ceramic Lagging is supplied in strips with a central ceramic length to match the belt width and 130mm rubber end pieces at each side.



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## FULL 80% CERAMIC LAGGING



## 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.

## 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</li>
- 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.



For more information, please contact:



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