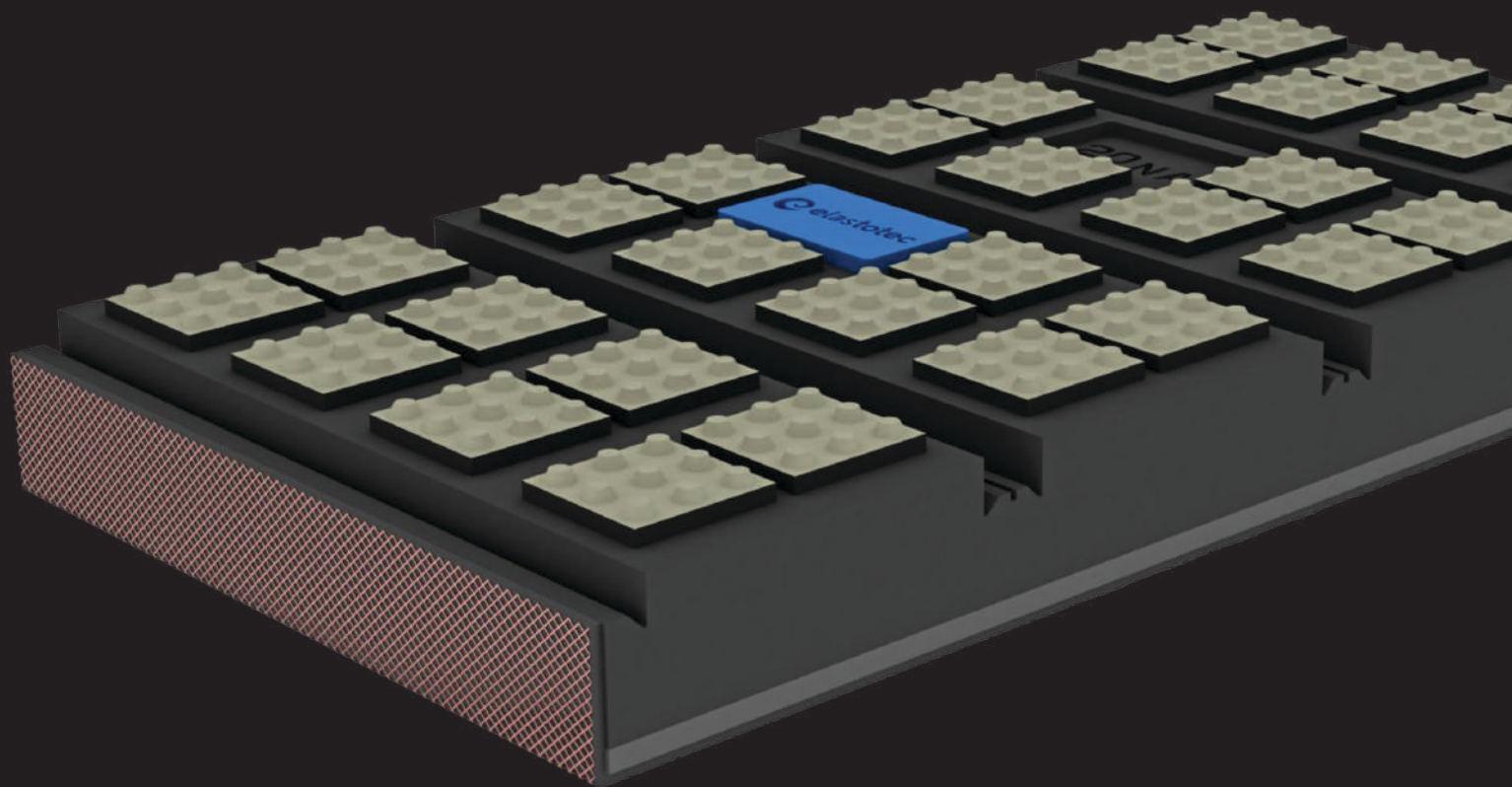




Extreme 42% Ceramic Lagging



Engineered to Perform

Elastotec Extreme 42% Ceramic Lagging is designed to be part of the medium ceramic coverage range. It has 2 ceramic tiles per row in between grooves. The ceramic tiles in rows of two make it more robust as they support each other. Together with the Medium Single Row 38% ceramic, this lagging has the best of both worlds, **flexibility to reduce risk of slip between lagging and belt and enough ceramic coverage distribute the stresses and deal with high-tension applications.**

The non FRAS version is designed with a soft rubber compound to allow for more flexibility.






Not compatible with flexible low tension fabric belts

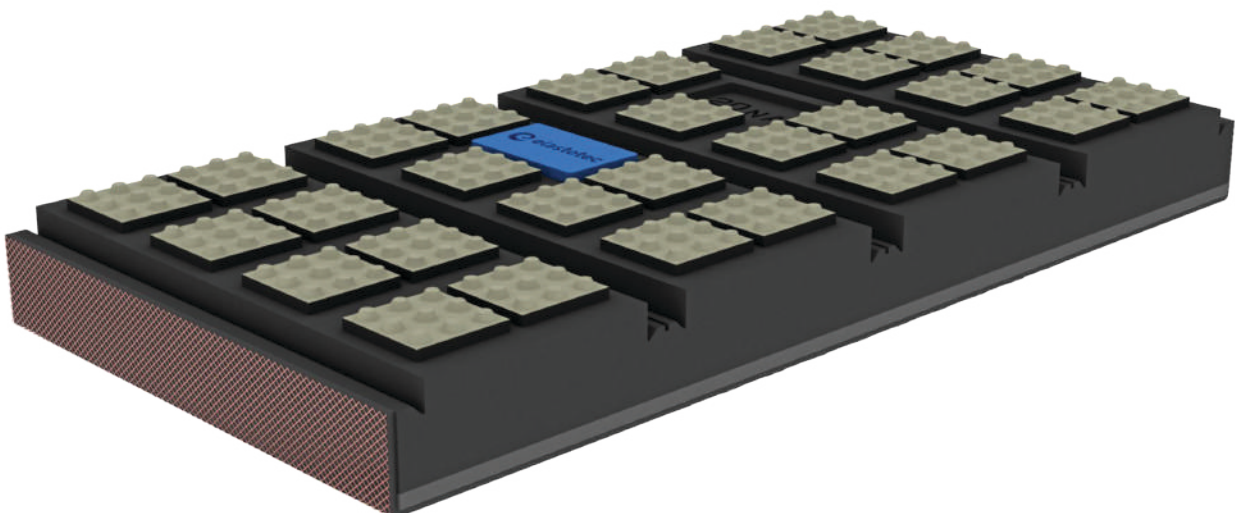
Elastotec Extreme 42% Ceramic Lagging has a **thicker ceramic tiles compared to standard lagging**. Ceramic tiles have an 8mm thick body with 1.5mm tapered dimples for drive pulleys and smooth tile surface finish for non drive pulleys. The thicker tiles **reduce the risk of tile cracking and increase the tile pull out force.**

Elastotec Extreme 42% Ceramic Lagging has 42% ceramic coverage combined with extra tile cracking and pullout force.

Application

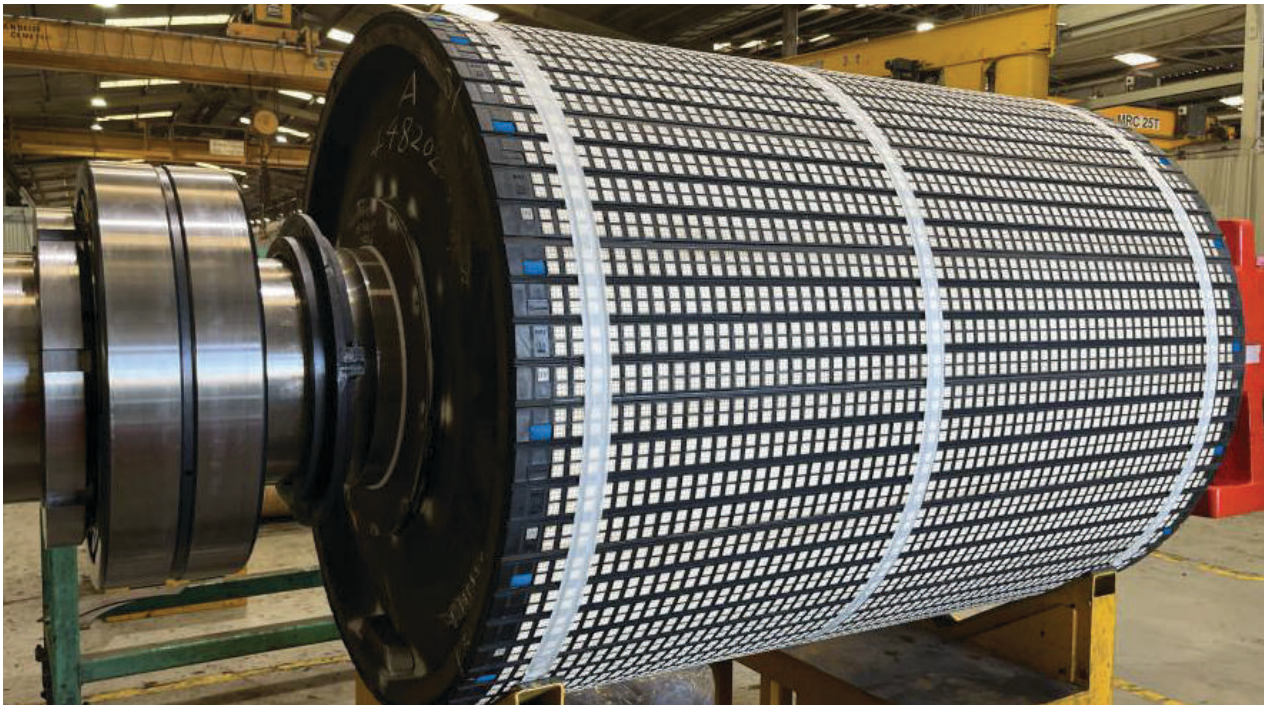
Elastotec Extreme 42% Ceramic Lagging is designed for use in the following demanding applications:

-  **Large drive and non-drive pulleys on high power belt conveyors. This includes gearless drive conveyors of all power ratings.**
-  Pulley in locations that are difficult to access and where pulley change out is difficult.
-  Critical locations where unplanned conveyor down time due to lagging failure must be eliminated.
-  Conveyors that operate across a wide temperature range.
-  Conveyors that operate in wet conditions.

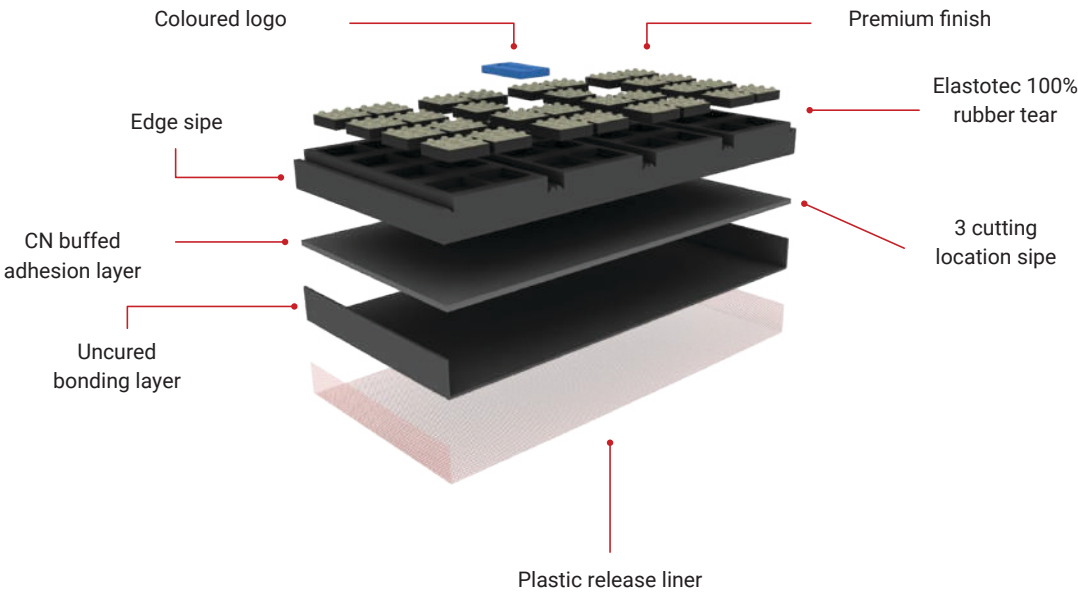


Design

Tile design for the Elastotec Extreme 42% Ceramic Lagging has been modified to increase the resistance to tile cracking and dimple loss.



HOT VULCANISED

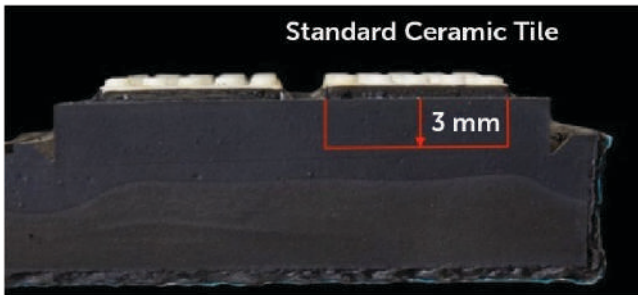


Rubber Specifications

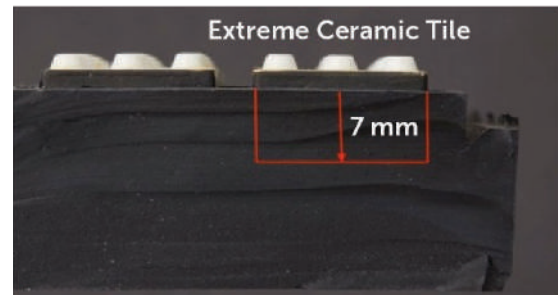
Typical values

	NAT
Polymer	SBR
Tensile strength (MPa) min ISO37	17.0
% Elongation min ISO37	550%
Hardness (shore A) ISO868	60+/-5
Abrasion resistance max vol. loss ISO 4649 method A (non-rotating)	80mm3
Heat ageing (Property change after 70°C 168hs)	Tensile strength +2% Elongation -20% Hardness 7 points
Continuous operating temperature	-40/+70°C

STANDARD CERAMIC TILE



EXTREME CERAMIC TILE






Tile body thickness has been increased to 8mm to increase resistance to cracking.

	THE CRACKING FORCE (N)
Standard 20 x 20 x 4mm tile (+1mm dimple)	2000 - 3000
Extreme 20 x 20 x 8mm tile (+1.5mm dimple)	> 10,000

	TILE PULL OUT FORCE (KGF)
Standard 20 x 20 x 4mm tile (+1mm dimple)	200 - 220
Extreme 20 x 20 x 8mm tile (+1.5mm dimple)	400 - 440

Flex Crack Testing of Ceramic Tiles

-  Dimple diameter has been increased and the profile has been tapered to increase resistance to breakage (see photo above).
-  Radii have been added to all corners to resist breakage.
-  Larger tile increases the bonded surface area from 7.2cm² for the “Standard” ceramic tile to 9.6cm² for the “Extreme” ceramic tile. The resulting tile pull out force increases as a result.



STANDARD CERAMIC TILE



EXTREME CERAMIC TILE

Ceramic Specifications

Typical values

Aluminium oxide	96%
Specific gravity g/cm ³	3.7
Vickers hardness HV (10)	1000 plus
Flexural strength (Mpa)	300
Compressive strength (Mpa)	1800
Fracture Toughness (Mpa m ^{1/2})	3.5



LAGGING SPECIFICATIONS – EXTREME 42% CERAMIC LAGGING

HOT VULCANISED – NAT

DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Extreme 42% Ceramic Lagging 20mm	ELA-DRC42-B-20EV	251mm-255mm	20.7mm-22.1mm	9.7m	7.40kg
Extreme 42% Ceramic Lagging 25mm	ELA-DRC42-B-25EV	251mm-255mm	25.7mm-27.1mm	9.7m	7.80kg

DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Extreme 42% Ceramic Lagging 20mm	ELA-DRC42-B-20LV	251mm-255mm	20.7mm-22.1mm	9.7m	7.40kg
Extreme 42% Ceramic Lagging 25mm	ELA-DRC42-B-25LV	251mm-255mm	25.7mm-27.1mm	9.7m	7.80kg

HOT VULCANISED – FRAS

DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Extreme 42% Ceramic Lagging 20mm	ELA-DRC42-F-20EV	251mm-255mm	20.7mm-22.1mm	9.7m	7.40kg
Extreme 42% Ceramic Lagging 25mm	ELA-DRC42-F-25EV	251mm-255mm	25.7mm-27.1mm	9.7m	7.80kg

DIMENSIONS DIMPLE TILES

PRODUCT	CODE	WIDTH	THICKNESS	MAX ROLL LENGTH	WEIGHT/lm
Extreme 42% Ceramic Lagging 20mm	ELA-DRC42-F-20LV	251mm-255mm	20.7mm-22.1mm	9.7m	7.40kg
Extreme 42% Ceramic Lagging 25mm	ELA-DRC42-F-25LV	251mm-255mm	25.7mm-27.1mm	9.7m	7.80kg

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

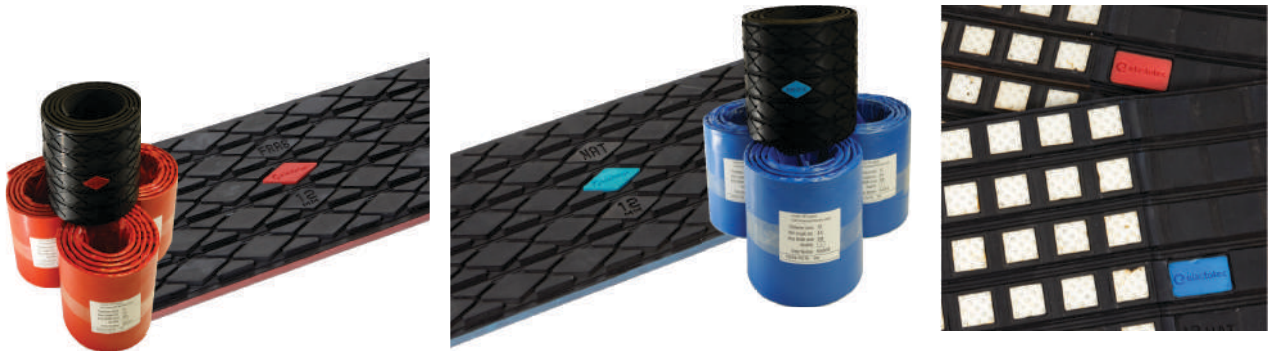
Strip: 25mm thick hot vulcanising, Nat 1.8m ceramic length product code: ELA-DRC42-B-20EV-SQ-01800
Thickness variation (all strips/pulley) +/-0.5mm

Recommendation for lagging thicknesses suitability for pulley diameters

20mm, for pulley diameters 1000mm and larger
25mm, for pulley diameters 1400mm and larger

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 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.



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.
- 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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