

## LAGGING COMPARISON



PARAMETER	RUBBER LAGGING NR/SBR	RUBBER LAGGING FRAS CN	POLYURETHANE LAGGING	COLD VULCANISED CERAMIC LAGGING	HOT VULCANISED CERAMIC LAGGING	DIRECT BOND CERAMIC LAGGING
Bond Type	CV,HV	CV,HV	CV,HV	CV	HV	DBCL
DIN Abrasion (mm <sup>3</sup> volume loss)	< 90	< 150	< 40	N/A	N/A	N/A
Use On Drive Pulleys	YES	YES	NO	YES	YES	YES
Use On Non Drive Pulleys	YES	YES	YES	YES	YES	YES
Resistance to Build Up	MINIMAL	MINIMAL	YES	SOME	SOME	YES FOR PLAIN, NO FOR DRIVE
Lagging Service Life (typical) (years)	1-2	1	3-5	>10	>10	>10
Cost to Install Lagging	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$6,000
Cost of Lagging	\$625	\$800	\$2,500	\$4,600	\$4,950	\$4,800
Total Lagging Cost per Pulley	\$4,625	\$4,800	\$6,500	\$8,600	\$8,950	\$10,800
Number of Relags in 10 years	6	10	2	1	1	1
Number of Plant Down Times	6	10	2	1	1	1
Number of OH&S Exposures	6	10	2	1	1	1
Lagging Cost Over 10 Years	\$27,750	\$48,000	\$13,000	\$8,600	\$8,950	\$10,800
Time Required for Lagging (hours)	8	8	8	8	12	48

Based on 1000mm diameter x 2,000mm face width pulley

CV = Cold Vulcanised  
HV = Hot Vulcanised  
DB = Direct Bond

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PARAMETER	COLD VULCANISED CERAMIC LAGGING	HOT VULCANISED CERAMIC LAGGING	DIRECT BOND CERAMIC LAGGING
Bond Failure Lagging to Pulley	Minimal rubber tear	100% rubber tear	100% Epoxy Tear
Adhesion strength to Pulley	> 9.0 (N/mm <sup>2</sup> )	> 20.0 (N/mm <sup>2</sup> )	> 20.0 (MPa)
Adhesion strength to Ceramic Tile	> 6.0 (MPa)	> 6.0 (MPa)	> 20.0 (MPa)
On site application	Yes	No	No
Factory application	Yes	Yes	Yes
Stable rubber hardness	Yes	Yes	N/A
Joins	Yes	No	No
Curing	Room Temp	130-140C	Room Temp
Bonding Pressure	Rubber Hammer	Autoclave 400-600KPa	N/A
Bonding pressure duration	Seconds	4 hours	N/A
Belt Cover wear	No	No	Yes for Drive Pulleys
No for Non Drive Pulleys			
Time Required for Lagging (hours)	8	12	48
Factory Application – Drive Pulleys	No	Preferred	OK – may cause belt cover wear
Factory Application – Non Drive Pulleys	No	Preferred	Preferred
Field Application- Drive Pulleys	Yes	No	OK – may cause belt cover wear
Field Application – Non Drive Pulleys	Yes	No	Preferred

N/A = Not Applicable

### Rubber Backed Ceramic Lagging Thickness to minimise slippage and belt cover wear

12mm Low Belt Tensions  
 15mm Medium Belt Tensions  
 20mm High Belt Tensions