



ULTRA HIGH MOLECULAR WEIGHT IDLER



30 Risi Smallfarms
Meyerton

Our 'UHMWPE' idler is engineered to deliver to our customers

A saving on idler expenditure of between 45 and 70 %

80 % less labour required to replace worn idlers

Huge savings on belt repairs (normally caused by idler malfunction)

'UHMWPE' idlers engineered for results...

Shaft: Our Shaft is a solid **32mm** diameter tapered to **30mm** for precise bearing fit and then **25 mm** shaft ends (across flats) to facilitate frame placement. Our shaft is **electroplated** to resist corrosion and rusty conditions. The shaft can be fitted to all standard frame configurations as well as specific non - standard frames.

Featured: **50 % reduction** in deflection (compared to the industry standard 25 mm shafts) thus the bearings life time is extended as deflection 'wears' any bearing.

Longer bearing life time = Longer Idler life time!

Across Flats: As per industry standard 18 mm (across flat) for the 127mm (5 inch) idler and 22mm for the 12 (6 inch) idler.

Bearings: **Heavy duty: (17 000 newton stress)** 6206 2RS deep groove ball bearings with **2 rubber seals** (the industry tends to use a **light duty (7 000 newton)** open bearing with no seals)

Feature: Our 2 rubber seals provide **increased protection** from dusty and wet conditions thus the bearing life time is extended.

Feature: Our heavy duty bearing's **impact and stress capabilities** ensure extended bearing life time.

Longer bearing life time = Longer Idler life time!

Seals: We use 2 Labyrinth seals per side (Mk 11) for dusty and high speed conditions. Alternatively, a labyrinth and a double lip seal (Mk 10) for wet/slow conditions.

(For both types plenty of grease is provided to lubricate the seals and provide additional dust trap capabilities)

Feature: Our unique sealing arrangement ensures increased bearing protection from dust, water and grime.

Longer bearing life time = Longer Idler life time!

Stone Guard: *Provides additional protection* for seals against dust and fine particles and has an additional side labyrinth seal to eject dust.

End Caps: Injection moulded (glass-filled Nylon) with O-ring between the end-cap and shell to **prevent water entry**.

Tube (Outer): Our 'Poly' tube consists of **Ultra High Molecular Weight Polyethylene (UHMWPE)** manufactured in house (Turn Key Process) with antistatic properties optional.

Our tube is 'machined' between centres to ensure even diameter along its length. **Extended bearing life** is achieved because of even running.

Our 'Poly' material is suitable for underground operation according to SABs test results. A **toxicity index of 2.3** resulted with a value of **3** being considered to be **low toxicity**.

Anti-Roll-back: Our idlers, 127 and 152 diameters, can be supplied with anti-Roll Back devices from roller brake, should the customer requires this. (It might be a legal requirement).

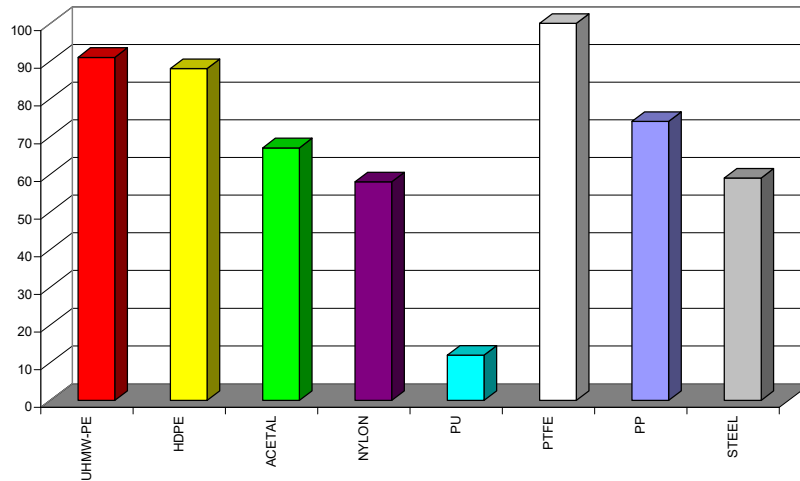
Low Coefficient of friction – Our 'Poly' material does not react chemically with substances, thus providing an extremely effective '**non-stick**' surface.

Feature: Substances (grime and dirt) does not stick to our tube (idler) thus **extending idler and conveyor belt life time**.

Feature: The Conveyor belt **will not grip** on our Poly surface (climb effect)



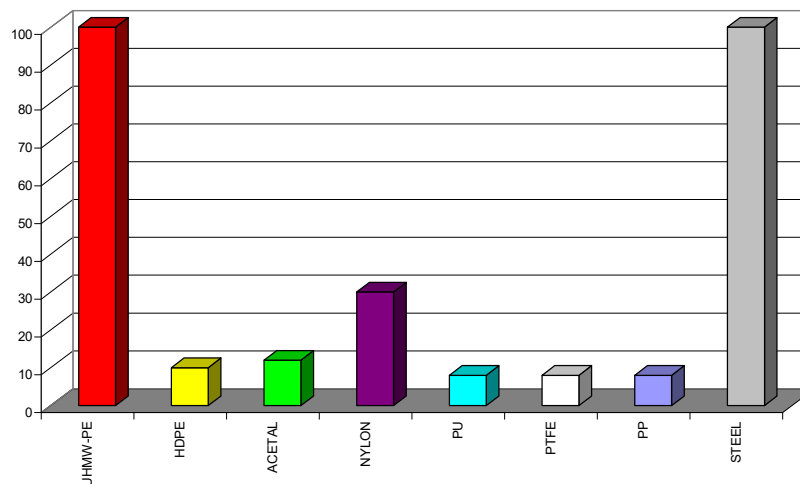
Comparison of Coefficient of Friction



High Impact Resistance – Our ‘Poly’ material has an excellent resistance to impact by having ‘memory capabilities’. After impacted by ie. rock etc, our material returns to its original size and shape.

Feature: No cutting of conveyer belts and or damage to. (Blade effect)
Feature: Doubles as an ‘impact idler’ thus lower inventories are needed.

Comparison of Impact Resistance

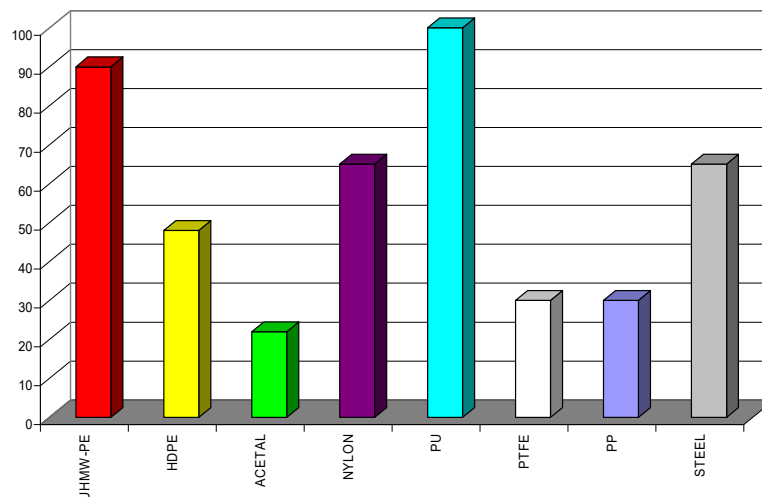


High Abrasion Resistance – Our ‘Poly’ material is ***extremely wear resistant*** (long lasting). In many cases ***better than steel*** and ***many times better than ‘HDPE’*** (Nylons).

Feature: ***less wearing*** effect on materials it is in contact with than the “harder” plastics. The molecular structure allows foreign particles to become imbedded in it and thereby ***reducing the wear*** on the contact body (Conveyer belt).



Comparison of Abrasion Resistance



Combined Features: With the combined features of ***Low Friction, High Impact Resistance and excellent Abrasion Resistance***, our tube (Idler Shell) ***guarantees a longer life***

time than any of the steel or HDPE (Nylon) tube idlers. ***We outlast any*** of these idler types by ***at least 5 times*** under any and all conditions!

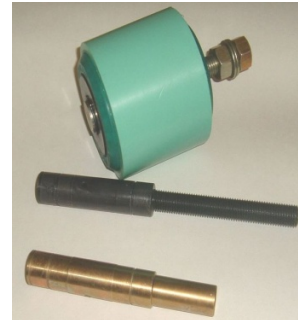
Feature: Less expenditure on idlers due to longer life times.

Feature: Less downtime as idlers do not need be replaced as often.

Feature: Longer conveyer belt life time as our engineered ‘Poly Idler’ causes no damage to belts.

Quality Idler = Increased Profit!

IDLERS FOR SICON TUBE/TEAR-DROP CONVEYOR



A selection of 89, 105 dia drum- and 125 dia biscuit Sicon Idlers manufactured from reprocessed UHMW-PE except the lower left 125 biscuit idler which was manufactured from virgin UHMW-PE material. Notice the 5 mm wear indicating hole in this idler.

MATERIALS:

Once again we use UHMWPE for the drum section which will be in contact with the belt. Reprocessed UHMW-PE has the unique feature that its properties improve with re-use.

Shaft: The shaft is produced from 26 mm 070M20 (EN3) material mm which has been machined all over. The shaft is then zinc plated.

Bearings: Two 6205 2RS Bearings.

Seals: In addition to the seals of the bearings, a double lip oil seal is installed to prevent the penetration of dust into the bearing cavity. Further, the front end has a solid face to prevent penetration of foreign particles into the bearing cavity.

Inspection hole: A hole is drilled into the drum section 5 mm from the OD so that wear can be inspected and managed.

FLEX-WALL IDLERS

Using the UHMWP-E tube we manufacture a 100 mm long 128 Dia idler with various stub shaft diameters/lengths to use on flex-wall/bucket conveyors. 100 mm long idlers are kept in stock but longer lengths can be accommodated

Our Guarantee:

We are confident in our 'UMWPE' idler. We *GUARANTEE* that our product will outlast any other idler by at least 3 (Three) times under similar conditions!

Guaranteed benefits:

A direct saving on idler expenditure of 45 to 70 %

80 % less labour required to replace worn idlers

Huge savings on belt repairs

Please feel free to request a personal demonstration of our product range. We have always welcomed the opportunity to put our idlers on trial at our prospective customer's premises. After all, the proof is in the pudding. Put us to the test...

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STANDARD GAUGE LENGTHS

SABS 1313:1999

Dimensions in millimeters

1	2	3	4	5	6	7	8
Belt width	Gauge length						
	Type of idler						
	Troughing and impact		2-roll troughing	2-roll V-return, flat return	1-roll flat return, flat carrying	Picking centre roll	1-roll extended return
	3-roll	5-roll					
400	180		250		494		
450	200		300		546		
500	210		350		596		
600	250		400	310	698		802
750	300			410	850	546	954
900	350			485	1 004	698	1 107
1 050	400	250		570	1 156	850	1 258
1 200	460	280		645	1 308	1 004	1 410
1 350	510	310		730	1 460	1 156	1 564
1 500	570	350		810	1 612	1 308	1 710
1 650	620	380		895	1 764	1 460	1 860
1 800	670	410		975	1 918	1 612	2 010
2 000	750	460		1 085	2 120	1 764	
2 100	775	485		1 156	2 222	1 918	
2 200	810	500		1 195	2 320	2 120	
2 400	880	546		1 308	2 528	2 222	

Notes:

1. Roll face length is 10 mm less than the gauge length for all idlers except extended return idlers.
2. Roll face length of extended return idlers is 32 mm less than the gauge length. (We have recommended 40 mm less, it performs better)

Requirements to place order:

1. Gauge length needed: Inside distance of fixing brackets. This should correspond to the gauge lengths for the belt width required – See above table.
2. Width across flats, normally either 18 or 22 mm. (18 mm is standard for 127 mm idlers)
3. Quantity required.

D - GAUGE LENGTH

F = FACE LENGTH

	Quesco cc		
IDLER DIMENSIONS			
Rev	Description	Date	
0	1 St Issu	12.01.2014	

A	B	C	D	E	F
