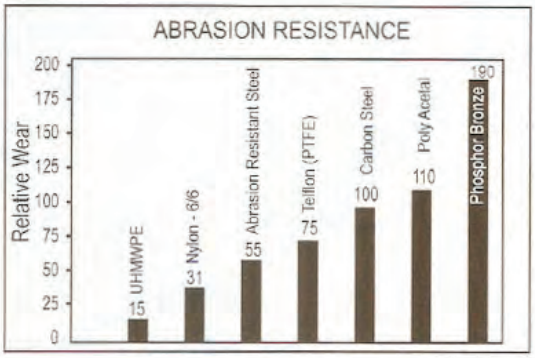
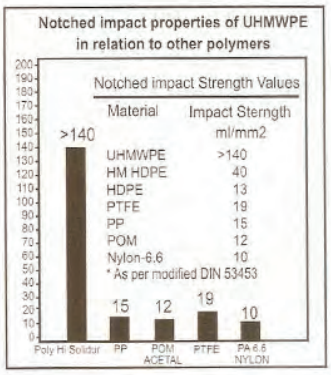
E-mail - dddrives@gmail.com
Tel : +91 022 2163 3694
Mob : 09322641435

DRIVES & DRIVES
Total Mechanical Power Transmission Solution

TYPICAL PROPERTIES OF UHMWPE MATERIAL :

PHYSICAL PROPERTIES	UNIT	TEST METHOD	TEST VALUE
*Density (of the Homogenously Pressed material)	g/cm ^{3}	DIN 53479	0.93 – 0.94
*Average molecular weight	g/mol	-	➢ 4.0 X 10^6
*Melt index MFI 190 / 15	g/10 min	DIN 53735	NIL
MECHANICAL PROPERTIES :			
*Yield stress	N/mm ^{2}	DIN 53455 ISO 527	>22
*Elongation at yield	%	Testing rate	
*Elongation at break	%	50mm/min	< 20 >200
*Tensile modulus	N/mm ^{2}	DIN 53457	720
*Ball indentation hardness	N/mm ^{2}	DIN ISO 2039 Part 1	>38
*30 sec value test load 365 N		DIN 53505	>65
*Shore hardness D	-	DIN 53453	No failure
*Notched impact strength (IZODIC)	mJ / mm	Internal test method (24hr at 1200RPM quartz sand of particle size 0.2 – 1.0mm)	100 (max)
*Wear by the sand – slurry method (based on HOECHST)	mg.		
THERMAL PROPERTIES			
*Vicat softening point VST	°C	DIN 5360ISO 306 method B	80
*Coefficient of linear expansion between 23 and 80 C	K^{-1}	DIN 53752	2 x 10^{-4}
ELECTRICAL PROPERTIES, measures under standard climatic conditions (23C, 50 % RH)			
*Volume resistivity	Ωcm	DIN 53482; VDE 0303, part 3	>10^{14}
* Surface resistivity	Ω	DIN 53482; VDE 0303, part 3	>10^{11}
*Dielectric strength	Kv/mm	DIN 53481; VDE 0303, part 2	45
(Arc resistance)	rating	DIN 53484; VDE 0303, part 5	L4





CHEMICAL RESISTANCE OF UHMWPE PODUCT IN COMPARISON WITH OTHER PLASTICS

	UHMWPE	PP (Poly Propylene)	POM (ACETAL)	PTFE (TEFFLON)	PA (NYLON)
Water	+	+	+	+	+
Acid	+	+	–	+	–
Lye	+	+	+	+	+
Hydrochloride Acid	+	+	+	+	+
Oils/ Fats	+	+	+	+	(+)
Alcohols	+	(+)	(+)	+	+
Easter	+	(+)	(+)	+	(+)
Organic Acid	(+)	–	(+)	+	(+)

+resistant (+) limited resistance – not resistant Elaborate list will be provided on request

WATER ABSORPTION

Test Standard	UHMWPE	Nylon 6/6 (Extruded)	Nylon 6 (Cast)	PTFE Teflon	Acetal
ASTM Code D570 Saturation %	<0.01	8,5 - 10	8,5 - 10	<0.01	0.9

UHMWPE is water repellent and doesnot swell.
UHMWPE retained its properties in humidconditions , which can occur in difference parts of the country and across seasonal changes.

COMPARISON OF DYNAMIC COEFFICIENT OF FRICTION ON POLISHES STEEL

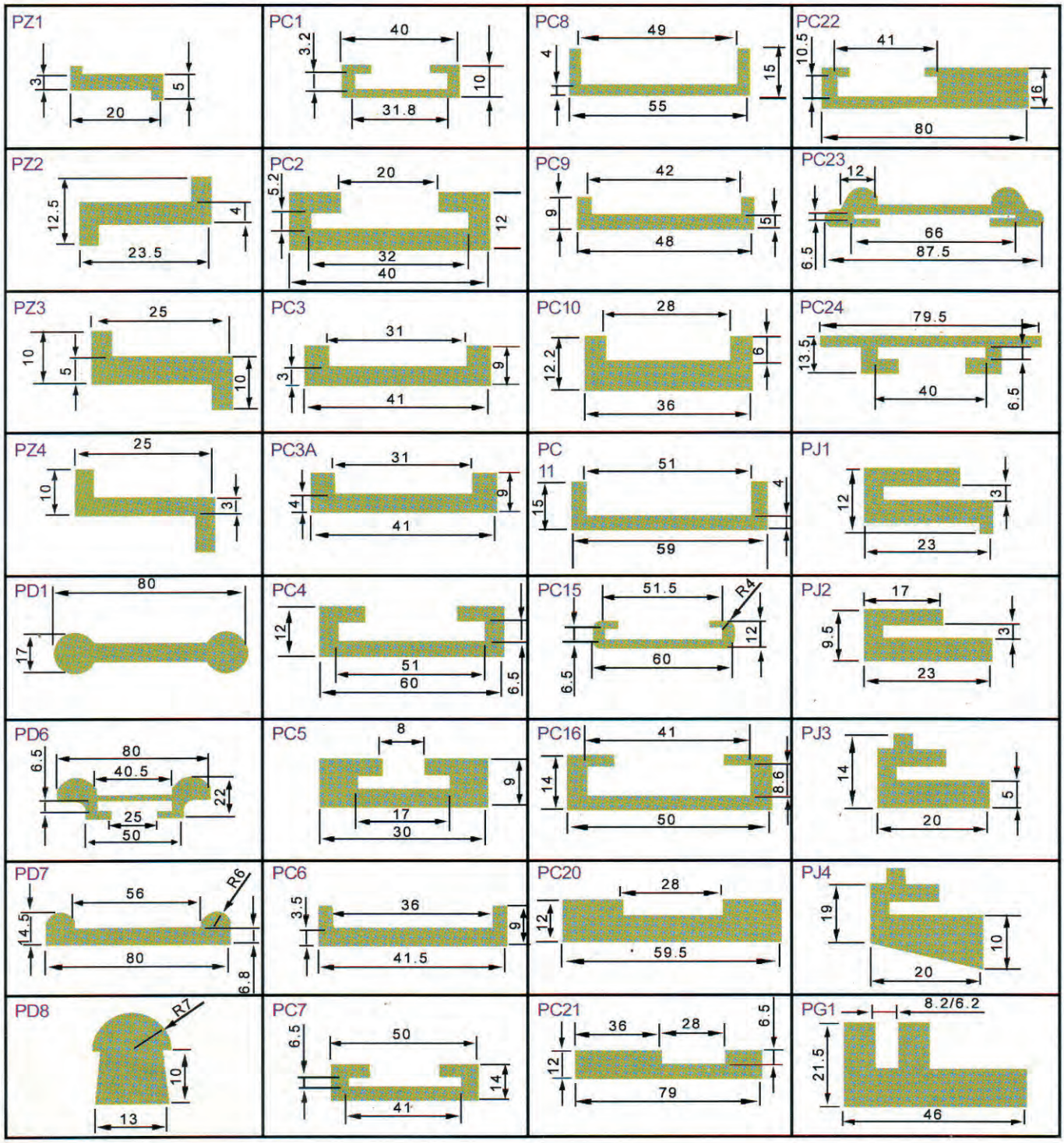
Lubricant	Mild Steel	UHMWPE	Nylon	Acetal	PTFE
Dry	0.25 0.35	0.12 0.20	0.15 0.40	0.15 0.35	0.40 0.25
Water	N.A	0.50 0.10	0.14 0.19	0.10 0.20	0.40 0.08
Oil	N.A	0.30 0.08	0.02 0.11	0.05 0.10	0.40 0.50

GUIDELINES FOR MACHINING OF UHMWPE PRODUCTS

Machining operation	Cutting Speed M/min	Feed Rate	Tool Material	Cutting Angle Degree	Clearance Angle Degree
Sawing (Circular)	3,000 to 4,000	0.1 to 0.2mm per saw tooth	Carbine Tip Saw	5 – 8	10 – 15
Planing	2,500	0.1 to 0.3mm per turn	HSS	20	5 – 30
Drilling	16 – 40	0.1 to 0.3mm per turn	Twist Drill HSS	15 – 25 5 – 15	16 5 – 15
Milling	800 – 2000	0.4mm Per saw toth	HSS		
Turning	90 - 400	0.1 to 0.5 mm/turn	HSS TC	15 – 25	5 – 15

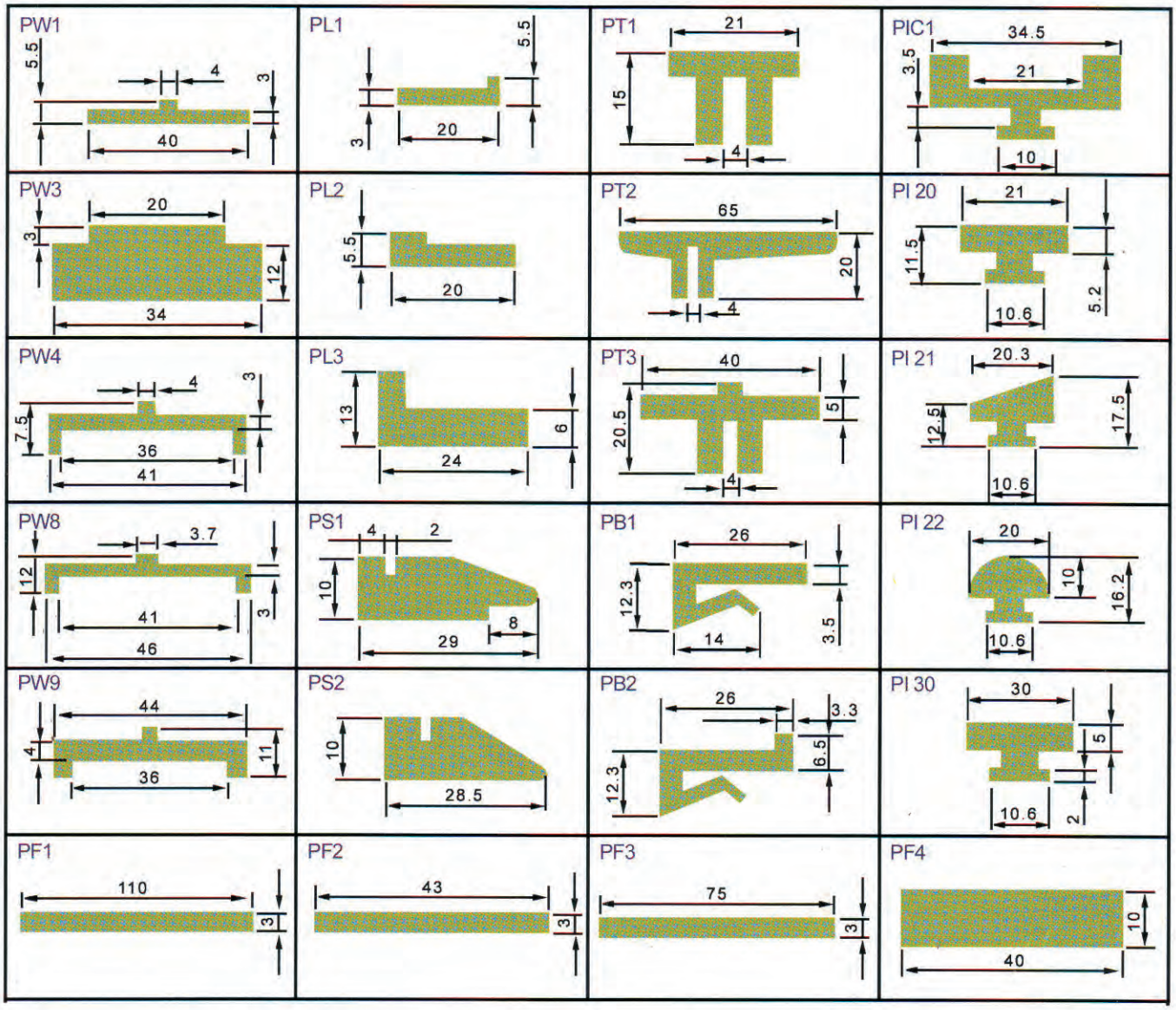
E-mail - dddrives@gmail.com
Tel : +91 022 2163 3694
Mob : 09322641435

UHMWPE
EXTRUDED PROFILES
MACHINED COMPONENTS



E-mail - dddrives@gmail.com
Tel : +91 022 2163 3694
Mob : 09322641435

UHMWPE
EXTRUDED PROFILES
MACHINED COMPONENTS

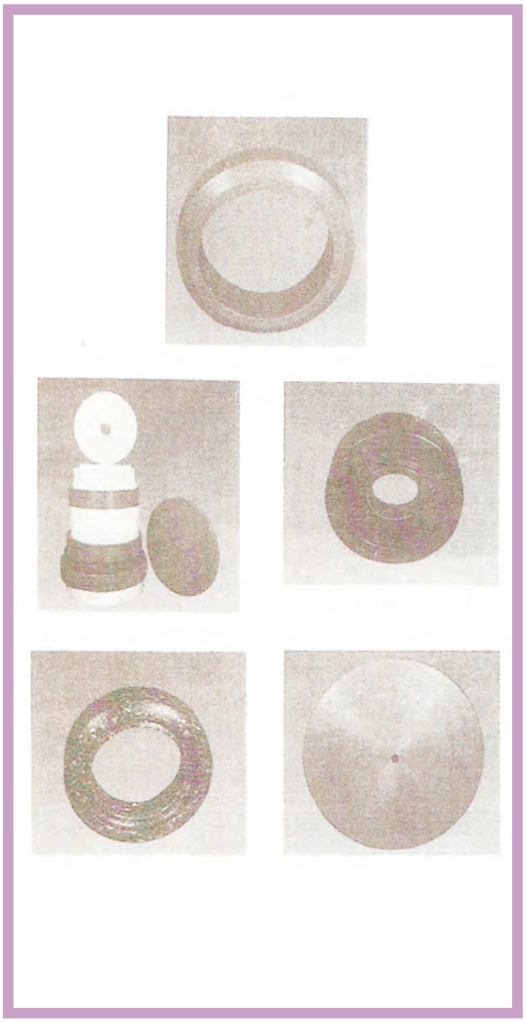


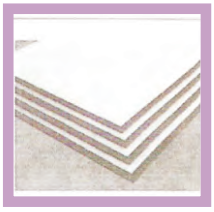
DRIVES & DRIVES

E-mail - dddrives@gmail.com
Tel : +91 022 2163 3694
Mob : 09322641435

POLYMER (UNBREAKABLE) TROLLEY WHEELS

SIZE				FOR WHEEL LOAD CARRYING CAPACITY IN KGS	
SI. NO.	DIA (OD)	WIDTH	BORE	QUALITY	
				COMMERCIAL	FIRST
1.	50mm	20mm	10mm	100	175
2.	70mm	25mm	15mm	175	210
3.	70mm	35mm	15mm	250	300
4.	75mm	28mm	10mm	250	300
5.	100 mm	30mm	15mm	250	300
6.	100 mm	40mm	15mm	300	360
7.	100 mm	50mm	15mm	320	380
8.	101 mm	42mm	15.5mm	300	360
9.	110 mm	100mm	15mm	320	380
10.	125 mm	35mm	15mm	320	380
11.	125 mm	45mm	15mm	320	380
12.	125 mm	50mm	15mm	350	425
13.	127 mm	42mm	15.5mm	320	480
14.	150 mm	40mm	25mm	350	425
15.	150 mm	50mm	25mm	400	380
16.	150 mm	150mm	25mm	400	480
17.	150 mm	75mm	25mm	450	500
18.	160 mm	50mm	25mm	400	480
19.	160 mm	68mm	25mm	460	500
20.	165 mm	75mm	25mm	450	500
21.	175 mm	75mm	25mm	400	480
22.	200 mm	50mm	25mm	460	550
23.	200 mm	55mm	25mm	460	550
24.	200 mm	60mm	25mm	460	550
25.	200 mm	75mm	25mm	460	600
26.	200 mm	100mm	25mm	460	600
27.	225 mm	50mm	25mm	400	500
28.	240 mm	55mm	25mm	400	500
29.	250 mm	50mm	25mm	400	550
30.	250 mm	60mm	25mm	400	600
31.	250 mm	75mm	25mm	400	600
32.	275 mm	87mm	25mm	400	600
33.	300 mm	50mm	30mm	500	600
34.	300 mm	60mm	30mm	500	730
35.	300 mm	75mm	30mm	500	925
36.	400 mm	100mm	30mm	500	925





HDPE SHEETS

HDPE is a versatile polymer used in variety of applications and industries. Its application includes chemical storage, chain guides, prosthetic devices, tanks etc.

Advantages
- Excellent impact resistance
- High tensile strength
- Low moisture absorption
- Good Chemical resistance
- Light in weight
- Good thermoforming properties

Delivery Programme
Compressed Sheets
1230 x 4300 x 10-75mm
1230 x 4000 x 50-100mm
Extruded Sheets
1250 x 2000 x 3-20 mm
Extruded Rods

10- 200 mm dua x 1m length

Other sizes available on request

CUTTING BOARD

Cutting Board are high Quality, High Impact Strength Cutting Board for material like Leather, Textile, Synthetics , Paper, Plywood, Foils, Rubber, Foam Rubber , Carpets, Asbestos etc. Also suitable for food industry as chopping boards.

Advantages
- No chopping
- Better life of dies, punches , knives etc
- High impact strength
- Different hardness o suit the requirement

Delivery Programme
Standard size
900 x 450 x 50mm
400 x 800 x 50mm
900 x 450 x 70mm
400 x 800 x 70mm
2150 x 1250 x 20 – 70mm
Other size available on request

Property	ASTM Test Method	Unit	Polyrib HP	Polyrib PPHI	POLYRIB PPICP
Melt flow index (230 °C/2.16kg)	D1238	g/10min	0.7	1.8	1.5
Tensile Strength at yield (50 mm/min)	D638	MPa	34	27	26.5
Elongation at yield (50 mm/min)	D638	%	9	13	7
Flexural Modulus (1 % secant)	D790A	MPa	1500	1000	1280
Notched izod impact strength (23° C)	D256	J/m	48	120	210
Heat deflection temperature (455 kPa)	D648	°C	104	78	88