

Petrorays PRODUCTS Co

126/128, Nagdevi street, 2nd Floor, Mumbai - 400 003. India

Phone: (022) 6634 9695 / 2340 3706 / 2346 3492 Fax: +91 (022) 2340 3706

Email: info@chiragtechno.com www.chiragtechno.com

POLY-URETHANE RODS, SHEETS & COMPONENTS

Cast Polyurethanes are cost effective and dependable Elastomers that combine the performance advantages of engineering plastics, metals and ceramics along with the resiliency and flexibility of rubber. These are internationally popular for their high load bearing capacity, high impact strength, high abrasion resistance, high resilience and excellent resistance to oil and grease.

The applications of polyurethanes include where the actions of sliding, bearing, stripping, forming, damping, cushioning, resting or rolling are involved.

For optimum performance, better results and longer life, selection of appropriate grades is important. These can be formulated with permutation & combination of selective chemicals & additives. Cast Polyurethanes have unlimited running applications & a huge replacement market is waiting to turn on.



ADVANTAGES OF POLY-URETHANE COMPONENTS

✓ Cost Effective	✓ High life Expectancy
✓ Dependable	✓ Elastomers combining the performance
✓ Resilience & Flexibility as rubber	advantages of engg. plastics, ceramics & metals

WIDE APPLICATIONS

Steel Plants:	Bridle Pinch, Applicator rollers coil car pads, Uncoiler segments & sleeves.
Printing & Paper Industry:	Printing transfer, coating rollers Acid resistant rollers
Metal Polishing / Debarring Industry:	Pipeline pigs, dredging floats marker Buoys, Fenders.
Transportation Civil Engineering Works:	Impellers, Heavy duty rods for bridges speed breakers
Material Handling Equipment:	Chute lining, Tank lining, Bucket conveyor parts, Hammers, rods & Bushes



APPLICATIONS OF POLY-URETHANE COMPONENTS

✓ Pads	✓ Punch Strippers
✓ Abrasion Resistant Lining	✓ Screens
✓ Gar Seals	✓ Spacers
✓ Jig & Fixtures	✓ Rollers & Sleeves
✓ Mallets	✓ Suspension Bushes
✓ Scrappers Blades	✓ Wheels & Wear Plates

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PROPERTIES OF POLY-URETHANE

MECHANICAL PROPERTIES

Hardness	ASTM TEST	30 A	60 A	75 A	85 A	90 A	95 A	60 D
Tensile Properties								
Break, psi	D - 412	380	4500	5500	6000	4500	5500	6500
100% modulus, psi	D - 412	80	250	350	600	1100	1800	3000
300% modulus, psi	D - 412	170	600	1000	1500	2100	4000	6500
Elongation, %	D - 412	515	500	500	500	450	320	300
Break Set, %	D - 412	-	5	10	10	10	10	15
Modulus of Elasticity, psi	D - 638	-	5	15	25	50	90	125
Compression Properties (Shape factor 0.56)								
Deffection, psi @ 5%	D - 575	15	30	70	180	310	450	-
Deffection, psi @ 10%	D - 575	25	70	140	390	625	890	-
Deffection, psi @ 15%	D - 575	34	110	220	560	875	1170	-
Deffection, psi @ 20%	D - 575	38	160	280	690	1125	1400	-
Deffection, psi @ 25%	D - 575	44	220	330	800	1350	1600	-
Compression Set, %								
Method A @ 70°C	D - 395	-	10	8	5	-	1	10
Method B @ 70°C	D - 395	9	10	15	25	30	40	50
Durometer, Shore ± 5	D - 2240	30A	60A	75A	85A	90A	95A	60D
Tear Property,pll Die C	D - 624	90	200	250	400	400	450	700
Abrasion Resistance, Tabor								
H 18 @ 1000gm load mg.loss 1000 cycies	C- 501	-	30	40	40	30	40	80
Specific Gravity	D - 792	1.2	1.26	1.26	1.26	1.10	1.15	1.18
Base		Ester	Ester	Ester	Ester	Ether	Ether	Ether

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TYPICAL APPLICATIONS	30A	60A	75A	85A	90A	95A	KEY PHYSICAL PROPERTIES
BUMPER PADS			X	X			Bashore Resilience
CUTTER BARS					X	X	Tear; Compression /Deflection
BUSHINGS			X	X	X	X	Abrasion, Tear
TUMBLER LININGS				X			Bashore Resilience
ISOLATION VIBRATION				X	X	X	Resilience; Compression /Deflection
CUTTING SURFACES				X	X	X	Tear; Compression, Deflection
DIE CUTTING PADS				X	X	X	Tear; Compression, Deflection
WEAR PADS			X	X			Tear; Compression, Deflection
IDLER ROLLERS					X	X	Tear; Compression, Deflection
SQUEEGEES		X	X				Tear; Solvent Resistance
FORK LIFT TIRES					X	X	Heat Build Up; Resilience
PRINTING ROLLS	X	X					Solvent Resistance, Compression Set,
OIL PIPELINE PARTS			X	X	X	X	Oil and Abrasion Resistance
HYDRAULIC SEALS					X	X	Oil Resistance; Compression Set
GRAIN SHOOT LININGS				X			Sliding Abrasion
OFFICE EQUIP. ROLLERS		X	X				Tear, Abrasion Resistance
ELEVATOR WHEELS					X	X	Compression Set; Compression /Deflection;
PAPERMILL ROLLS					X	X	Heat Build Up; Hydrolysis Resistance
GASKETS	X	X	X	X	X	X	Compression Set; Chemical Resistance