



Overview

Durethane® S is the foundation of MPC's Durethane® technologies and includes our family of versatile solid polyurethane formulations. Our polyurethane chemists have been perfecting Durethane® S formulations since 1965, developing them into the reliable materials our customers have depended on for decades.



Benefits

- High abrasion resistance and tolerance to tight surface finishes
- Customizable physical properties to meet demanding specifications
- Can be made into any shape component or machined to precise specifications
- FDA-compliant formulations available
- Resistant to oils, chemicals and other challenging environments
- Can be made conductive using our patented metal salts technology

Applications

Durethane® S can be easily adapted for a wide range of applications. The superior performance of our custom-formulated solids makes them the material of choice for many mission-critical applications, including:

- Military & Defense
- Material Handling
- Medical Devices
- Digital Imaging
- Exercise Equipment
- Wheels & Casters



Physical Properties

Our trade-secret formulations allow us to achieve a wide range of physical properties, including:

- Hardness range from Shore 20A to 70D¹
- Elongation range from 160% to 850%²
- Tensile strength range from 250 PSI to 7800 PSI³
- Tear strength range from 30 to 800³
- Compression set range from 5% to 40%⁴

¹ Hardness D2240, Shore A,D

² ASTM D412

³ ASTM D624, DIE C

⁴ ASTM D395B @ 158F, 22 Hours



Physical Properties for Durethane® S Materials

Name	Hardness	Backbone	Tensile Strength	Elongation	Tear Strength	Compression Set	Available for Durethane® Standard Shapes
	Shore A or D	TDI or MDI	PSI	%	DIE-C (PLI)	%	
DS220A	20A		325	550	55	10	√
DS720A	20A		380	420	30	10	√
DS225A	25A		500	575	70	9	√
DS230A	30A		1000	625	80	8	√
DS330A	30A		250	160	50	8	√
DS235A	35A		1500	650	100	7	√
DS335A	35A		325	170	55	7	√
DS240A	40A		2000	675	125	6	√
DS340A	40A		425	180	60	6	√
DS245A	45A		2700	700	150	5	√
DS345A	45A		475	190	65	5	√
DS250A	50A		3200	775	175	5	√
DS350A	50A		520	200	70	5	√
DS255A	55A		3750	850	200	5	√
DS355A	55A		575	225	75	5	√
DS260A	60A		3750	850	200	5	N/A
DS360A	60A		650	250	80	10	√
DS765A	65A		2000	550	200	35	√
DS270A	70A		5000	800	250	30	√
DS370A	70A		2000	450	200	20	√
DS770A	70A		2500	600	240	30	√
DS275A	75A		6000	700	325	32	√
DS375A	75A		2200	500	225	30	√
DS775A	75A		3000	650	260	27	√
DS280A	80A		7000	550	400	35	√
DS380A	80A		3000	700	275	40	√
DS780A	80A		3500	700	300	25	√
DS390A	90A		5200	430	400	32	√
DS395A	95A		5800	380	475	35	√
DS550D	50D		6000	350	500	35	√
DS555D	55D		6500	325	525	37	√
DS560D	60D		7000	300	600	37	√
DS570D	70D		7800	220	800	40	√

LEDGEND



MDI Ether



TDI Ether



TDI Ester