

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 PSI²
- 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 Shore A or D	Backbone TDI or MDI	Tensile Strength PSI	Elongation %	Tear Strength DIE-C (PLI)	Compression Set %
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
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