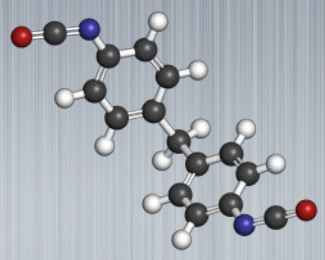
TechSpecs Durethane® S



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 70D[1]
- Elongation range from 160% to 850%[2]
- Tensile strength range from 250 PSI to 7800 PSI[2]
- Tear strength range from 30 to 800[3]
- 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 %	Available for Durethane® Standard Shapes
DS220A	20A	O²	325	550	55	10	√
DS720A	20A	O	380	420	30	10	√
DS225A	25A	O²	500	575	70	9	√
DS230A	30A	O²	1000	625	80	8	√
DS330A	30A	O	250	160	50	8	√
DS235A	35A	O²	1500	650	100	7	√
DS335A	35A	O	325	170	55	7	√
DS240A	40A	O²	2000	675	125	6	√
DS340A	40A	O	425	180	60	6	√
DS245A	45A	O²	2700	700	150	5	√
DS345A	45A	O	475	190	65	5	√
DS250A	50A	O²	3200	775	175	5	√
DS350A	50A	O	520	200	70	5	√
DS255A	55A	O²	3750	850	200	5	√
DS355A	55A	O	575	225	75	5	√
DS260A	60A	O²	3750	850	200	5	N/A
DS360A	60A	O	650	250	80	10	√
DS765A	65A	O	2000	550	200	35	√
DS270A	70A	O²	5000	800	250	30	√
DS370A	70A	O	2000	450	200	20	√
DS770A	70A	O	2500	600	240	30	√
DS275A	75A	O²	6000	700	325	32	√
DS375A	75A	O	2200	500	225	30	√
DS775A	75A	O	3000	650	260	27	√
DS280A	80A	O²	7000	550	400	35	√
DS380A	80A	O	3000	700	275	40	√
DS780A	80A	O	3500	700	300	25	√
DS390A	90A	O	5200	430	400	32	√
DS395A	95A	O	5800	380	475	35	√
DS550D	50D	O	6000	350	500	35	√
DS555D	55D	O	6500	325	525	37	√
DS560D	60D	O	7000	300	600	37	√
DS570D	70D	O	7800	220	800	40	√

LEDGEND

O MDI Ether

O TDI Ether

O² TDI Ester

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