

## Lingen Plastic Rubber .

### Deprene

Deprene is vulcanized EPDM/PP thermoplastic elastomer, as well as Santoprene and Sarlink. With advantage of thermoplastic process, Coloration, recycle etc., Deprene is the idea material to replace EPDM, NBR and PVC.

Properties	ASTM	Unit	101-35 201-35	101-55 201-55	101-64 201-64	101-73 201-73	101-80 201-80	101-87 201-87	103-40 203-40	103-50 203-50
Hardness 15s 5s	2240	Shore	35A 40A	55A 61A	65A 69A	73A 79A	80A 86A	87A 91A	38D 42D	48D 50D
Density	D297	g/cm3	0.96	0.95	0.95	0.94	0.93	0.93	0.93	0.92
Tensile Strength	D412	MPa	3	5	6	7	9	12	19	23
Elongation	D412	%	450	450	450	420	420	400	400	400
Tear Strength	D624	KN/m	10	20	25	32	40	50	70	90
Tension Set	D412	%	6	8	10	12	15	20	30	50
Compression Set  (23 °C,22h) (70 °C,22h) (120 °C,22h)	D395	%	12 22 31	16 25 39	18 26 43	23 32 49	25 36 56	36 45 62	38 50 70	49 65 81
Heat Aging 150 °C 168h										
Tensile Strength Retain		%	106	98	115	105	100	96	91	92
Elongation Retain		%	103	95	108	88	85	78	80	86
Brittle Temp.		°C	-60	-60	-60	-60	-60	-50	-50	-40

### Process Guide

- Use PP or PE to purge barrel
- Use PP or PE based masterbatch

Injection	Temperature °C		
	< 50A	60A-85A	> 90A
Hardness	< 50A	60A-85A	> 90A
Rear	130-150	150-170	160-180
Middle	150-170	170-190	170-190
Front	180-200	190-220	190-230
Nozzle	180-190	190-210	190-220
Melt	160-190	180-200	190-210
Mold	30-80	30-80	30-80
Speed	100-200 rpm		
Back Pressure	0.07-- 0.7Mpa		

Extrusion	Temperature °C		
	< 50A	60A-85A	> 90A
Hardness	< 50A	60A-85A	> 90A
Hopper	130-140	140-150	150-170
Middle	140-160	150-170	160-180
Measurement	160-180	170-190	180-200
Front	170-190	180-200	190-210
Mold	160-180	170-190	180-200
Melt	150-170	160-180	170-190
Comp. Ratio	3:1		
Screen	20 - 60 Mesh		

## Lingen Plastic Rubber .

### Delene

Delene is SEBS based compound, with advantages of soft touch, elasticity, even transparency, Delene is the idea material to replace PVC, natural rubber and silicon rubber in non-fatty contact application.

Properties	ASTM	Unit	1010	1020	1030	1040	1050	1060	1070	1080
Hardness - Shore	D-2240	A	10	20	30	40	50	60	70	80
Density	D-792	g/cm <sup>3</sup>	0.90	0.90	0.91	0.92	0.92	0.93	0.93	0.93
Tensile Strength	D-412	MPa	1.2	2.1	3.2	4.8	6.3	7.4	9.6	12
Elongation	D-412	%	780	750	720	720	700	700	680	620
Comp. Set	D-395	%	20	20	20	20	22	22	25	28
Melt Index 190 °C 5Kg	D-1238	g/10min	10	10	10	15	21	28	35	37
Shrinkage	D-955	%	2.8	2.5	2.1	1.8	1.6	1.4	1.3	1.2
Brittle Temp.	D746	°C	-65	-65	-65	-65	-65	-65	-60	-60

#### Process Guide

- Use PP or PE to purge barrel
- Use PP or PE based masterbatch

Injection	Temperature °C		
	< 40A	45A-75A	> 80A
Hardness	< 40A	45A-75A	> 80A
Rear	130-140	140-150	160-180
Middle	140-160	150-180	170-190
Front	160-180	170-200	190-220
Nozzle	180-190	190-200	190-210
Melt	170-180	180-190	190-200
Mold	30-80	30-80	30-80
Speed	100-200 rpm		
Back Pressure	0.07-- 0.7MPa		

Extrusion	Temperature °C		
	< 40A	45A-75A	> 80A
Hardness	< 40A	45A-75A	> 80A
Hopper	130-140	140-150	150-170
Middle	140-160	150-170	160-180
Measurement	160-180	170-190	180-200
Front	170-190	180-200	190-210
Mold	160-180	170-190	180-200
Melt	150-170	160-180	170-190
Comp. Ratio	3:1		
Screen	20 - 60 Mesh		

Special grade such as PC/ABS bonding, food contact, medical applications are also available.  
Please contact us for detail technical information.

## Lingen Plastic Rubber .

### Delon

Delon is a copolymer composed of an aromatic polyester as the hard element and an aliphatic polyether as the soft element. As well as Hytrel TEEE, Delon has excellent heat-aging resistance and oil resistance.

Properties	Unit	3030	4040	5050	6055	7060
Hardness	D	30	40	50	55	60
Density	g/cm <sup>3</sup>	1.10	1.16	1.18	1.20	1.22
Tensile Strength	Mpa	10	14	20	23	25
Elongation	%	600	550	500	450	400
Flexural Strength	MPa	28	48	120	198	300
Tear Strength	KN/m	77	90	128	147	160
Melt Point	°C	160	192	195	200	210
Brittle Temperature	°C	-70	-70	-70	-70	-50
Vicat soft point	°C	70	130	155	170	190

### Process Guide

- Use PP to purge barrel
- Use PP based masterbatch
- Pre-dry at 100 °C for 4 ~ 8 hours
- Injection temperature is 10 ~ 20 °C higher than melt point
- Extrusion and blow molding temperature is 5~10 °C higher than melt point

# Lingen Chemicals

## Delas

Delas is NBR/PVC thermoplastic elastomer, with excellent grease resistance, weather resistance, Delas could replace NBR, Neoprene and PVC.

Properties	ASTM	Unit	165	170	175	180	185	190	195
Hardness	D-2240	A	65	70	75	80	85	90	95
Density	D-792	g/cm <sup>3</sup>	1.26	1.25	1.27	1.27	1.26	1.26	1.26
Tensile Strength	D-412	MPa	8.9	10.9	12.0	11.7	13.3	15.5	16.7
Elongation	D-412	%	490	480	430	390	360	330	290
Tension set	D-412	%	48	52	76	70	72	75	78
Tear Strength	D-624	KN/m	32	35	36	38	40	42	45
Compression Set 70 °C	D-395	%	65	64	66	64	61	65	65
Working Temperature	D-746	°C	-21~80	-25~80	-26~80	-22~80	-18~80	-15~80	-15~80

### Process Guide

- Use PVC to purge barrel
- Use PVC based masterbatch
- Pre-dry at 60 °C 4 ~ 6 hours

Injection	Temperature °C
Rear	130-140
Middle	140-160
Front	160-190
Nozzle	170-190
Melt	170
Mold	30-80
Speed	100-200 rpm
Back Pressure	0.05-- 0.5Mpa

Extrusion	Temperature °C
Hopper	130-140
Middle	140-150
Measurement	140-150
Front	150-170
Mold	150-170
Melt	160
Comp. Ratio	2.5:1
Screen	20 - 60 Mesh