HD and SL Molding Materials – Thermosets

Materials Summary Sheet

12

Offering solutions for a wide range of applications such as...

- **Lab and office equipment**
- **Computers and peripherals**
- **Telecommunications and electronics**
- **Industrial equipment**
- **Disk drives**

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HD and SL Molding Materials - Thermosets

ISOLOSS® HD elastomers exhibit excellent load bearing strength, compression-set resistance and stiffness stability over a broad temperature range. ISOLOSS SL series elastomers are highly damped, low modulus, thermoset compounds with exceptional molding stability. Both materials exhibit high internal damping, excellent resistance to creep and compression and can be metal-bonded during molding.

Typical Properties

Property	*ISOLOSS HD*	*SL-20100*	*SL-20300*	*SL-25200*	*SL-35100*	*SL-35300*	*SL-50100*	*SL-50300*	*SL-60100*
Description	Urethane Solid Thermoset	Synthetic Rubber	Synthetic Rubber	Synthetic Rubber	Synthetic Rubber	Synthetic Rubber	Synthetic Rubber	Synthetic Rubber	Synthetic Rubber
Hardness									
ASTM D2240									
Shore A Durometer 23C (73F)									
5 sec impact									
15 sec impact	58	21	20	27	35	32	50	47	60
Flammability									
UL 94 0.15 cm (0.06 in thick)	Listed HB			Listed V-0					
0.32 cm (0.125 in)			Meets HB			Meets HB		Listed HB	
FMVSS-302	Meets at 0.32 cm (0.125 in)		Meets			Meets		Meets	
FAR 25.853 (a) Appendix F Part I (a) (1) (ii) (12 sec)									
Compression Load Deflection kPa (psi)									
ASTM D575									
at 0.51 cm/min (0.2 in/min)									
10% kPa (psi)	565 (82)	124 (18)	124 (18)	179 (26)	248 (36)	172 (25)	407 (59)	372 (54)	897 (130)
20% kPa (psi)	1241 (180)	241 (35)	234 (34)	352 (51)	497 (72)	344 (50)	780 (113)	710 (103)	1829 (265)
30% kPa (psi)	2103 (305)	393 (57)	372 (54)	565 (82)	780 (113)	558 (81)	1207 (175)	1145 (166)	3043 (441)
Compression Set (%)									
ASTM D395 Method B									
22 hr at 22C (72F)	4.5	3	2	5	2	3	3	3	6
22 hr at 70C (158F)	6.1	8	8	8	9	6	7	6	16
Tensile Strength kPa (psi)									
ASTM D412	8963 (1300)	3653 (530)	4246 (616)	4384 (636)	6120 (888)	6481 (940)	9422 (1367)	10528 (1527)	8974 (1302)
Tear Strength kN/m (lbf/in)									
ASTM D624	38 (218)	12.2 (69)	12.9 (73)	15.6 (88)	17.8 (101)	18.2 (103)	26.0 (147)	18.6 (105)	40.0 (227)
Temperature Range C									
Peak Damping Performance									
Temperature Range									
@ 10 HZ	7 to 25	-9 to 16	-9 to 16	-9 to 12	-3 to 20	-3 to 20	5 to 29	3 to 27	6 to 27
@ 100 HZ	15 to 38	-2 to 31	-2 to 31	-3 to 26	5 to 34	5 to 34	12 to 41	10 to 40	13 to 39
@ 1000 HZ	26 to 56	8 to 51	8 to 51	8 to 45	14 to 52	14 to 52	23 to 56	21 to 54	22 to 55
Recommended Maximum Intermittent Temperature	107C (225F)	100C (212F)	100C (212F)	100C (212F)	100C (212F)	100C (212F)	100C (212F)	100C (212F)	100 C (212F)
Maximum Continuous Service Temperature	90C (194F)	90C (194F)	90C (194F)	90C (194F)	90C (194F)	90C (194F)	90C (194F)	90C (194F)	90C (194F)
RoHS Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

The data listed in this materials summary are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose.

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