



# Elastollan® 1100 Series

## Technical Bulletin

## Polyether Type

Elastollan<sup>®</sup> 1100 series of products are polyether-based thermoplastic polyurethanes. They exhibit excellent low temperature properties, hydrolysis resistance and fungus resistance. These products can be injection molded, blow molded and extruded.

**Extrusion grades: Elastollan<sup>®</sup> 1175AW, 80A, 85A, 90A and 95A**

**Injection molding grades: Elastollan<sup>®</sup> 1175AW to 1174D**

Physical properties	Units	ASTM Method	1175AW*	1180A	1185A	1190A	1195A	1154D <sup>1</sup>	1164D <sup>1</sup>	1174D
Specific gravity	gr./cm <sup>3</sup>	D-792	1.14	1.11	1.12	1.13	1.14	1.16	1.18	1.19
Hardness	Shore A D	D-224	76 ± 2	80 ± 2	86 ± 2	91 ± 2	95 ± 2	-	-	-
			-	-	-	42 ± 2	47 ± 2	53 ± 2	64 ± 2	73 ± 2
Tensile strength	MPa psi	D-412	30	32	33	37	36	40	41	45
			4500	4700	4800	5300	5200	5800	6000	6500
Tensile stress @ 100% elongation	MPa psi	D-412	4.3	5.5	7.6	10	12	20	25	32
			620	800	1100	1500	1750	2900	3600	4600
@300% elongation	MPa psi		8.3	10	12	1.7	21	30	33	38
			1180	1500	1750	2500	3000	4300	4800	5500
Elongation @brk.	%	D-412	740	600	640	575	490	460	425	350
Tensile set @brk.	%	D-412	-	45	55	60	65	70	90	90
Compression Set 22 hrs@ 23°C	%		20	25	25	25	30	40	40	50
			40	45	45	45	45	50	50	55
Tear strength	N/mm lb./in.	D-624 DIE C	80	90	105	125	140	180	220	255
			460	515	600	715	800	1025	1250	1450
Abrasion resistance	mg (loss)	D-1044 <sup>2</sup> (Taber)		25	30	45	55	75	55	75

*Test samples were cured 20 hours @ 100°C before testing.*

*\* Contains proprietary plasticizer*

**NOTE:** <sup>1</sup> These products can only be ordered in minimum quantities. Please contact your sales representative for details.

<sup>2</sup> H-18 wheel, 1000 gm weight and 1000 cycles.

**Caution:** Contact with product dusts from regrinding operations may cause temporary irritation of the eyes and the respiratory tract. Use with local exhaust. Under hot melt processing conditions (170-230°C), wear personal protective equipment to prevent thermal burns.

**First aid:** *Eyes*-Flush eyes with flowing water at least 15 minutes. If irritation develops, consult a physician. *Skin*-Skin contact with hot melt may cause thermal burns. Call a physician immediately. *Inhalation*-If vapors generated from the hot melt process are inhaled, move to fresh air. Aid in breathing. If breathing difficulties develop, see a physician immediately.

**In case of fire:** Use water fog, foam, CO<sub>2</sub>, or dry chemical extinguishing media. Firefighters should be equipped with self-contained breathing apparatus and turnout gear.

**Disposal:** Waste material, unused contents and empty containers must be disposed of in accordance with applicable local, state or federal regulations. Refer to our Material Safety Data Sheet for specific disposal instructions.

**In case of chemical emergency:** Call CHEMTREC day or night for assistance and information concerning spilled material, fire, exposure and other chemical accidents. 800-424-9300

**Attention:** This product is sold solely for use by industrial institutions. Refer to our Material Safety Data Sheet regarding safety, usage, applications, hazards, procedures and disposal of this product. Consult your supervisor for additional information.

No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth or that the products designs, data or information may be used without infringing the intellectual property rights of others in no case shall the descriptions information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data and information furnished by BASF hereunder are provided gratis and BASF assumes no obligation or liability for the description, designs data and information given or results obtained, all such being given and accepted at your risk.