

Replaces edition from 2002-12-13

Desmopan® W DP 85085A*

(Formerly: Desmopan® KU2-88585)

- **Aliphatic thermoplastic polyurethane elastomer (TPU)**
- **Shore A hardness of 85**
- **For automotive interior applications**

Product description

The new Desmopan® product line with the designation DP 85... is based on an aliphatic isocyanate. In addition to possessing the familiar properties of TPUs, these products do not yellow under the action of UV light. They additionally offer a particularly high resilience and "snappiness".

Desmopan® W DP 85085A* has been developed for injection molding and can also be used in light color shades for automotive interior applications.

It is particularly suitable for overmolding other thermoplastics, such as Novodur® or Bayblend®. DP 85085A* is only suitable for extrusion applications to a limited extent. Films and coextrudates have to be run through a polishing stack. DP 85085A* can be processed by extrusion blow molding.

Desmopan® W DP 85085A* displays the following property profile:

- high extensibility
- high flexibility, including at low temperatures
- no yellowing under the action of UV light
- high resilience
- good abrasion resistance
- low density

As with TPUs based on aromatic isocyanate, the action of UV light causes mechanical degradation in TPUs based on aliphatic isocyanate too.

Desmopan® W DP 85085A* now contains stabilization that is sufficient for the majority of applications. Additional stabilization may be necessary for specific colors or applications. We will be pleased to advise you.

* Siehe Haftungsausschluss für Versuchsprodukte

Delivery form:

Transparent-opaque oval granules packed in 130-kg metal drums with a PE inliner.

Pre-drying:

2 - 3 hours at 90 °C in high-speed driers or dehumidifying/desiccant driers.

Processing:

Injection molding:	melt temperature 190 to 210 °C; mold temperature 25 °C
Extrusion:	melt temperature 180 to 200 °C

Recycling:

After use, single-sort molded parts in Desmopan® W DP 85085A* which do not contain any pollutants can be mechanically recycled. Molded parts which are not pollutant-free can be chemically recycled or incinerated with energy recovery.

Parts should be marked in accordance with DIN ISO 11469 (DIN 54840). The identification mark for parts made of Desmopan® is as follows:



>TPU<

Further details may be found in our Application Technology Information brochure ATI 0309 d, e.



Bayer Polymers

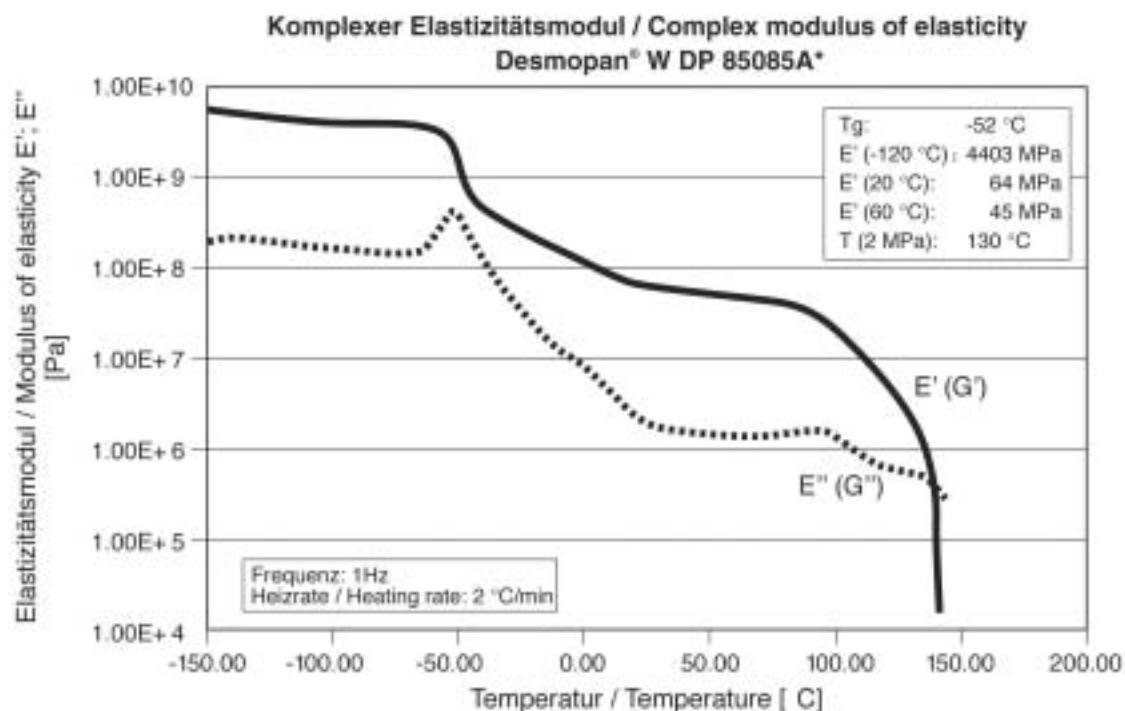


Fig. 1

Richtwerte / Reference data
Desmopan® W DP 85085A*

Eigenschaft / Property	Einheit / Unit		Normen / Standards
Shore Härte / Shore hardness A/D		85 / –	ISO R 868
Modul 100 %	MPa	6.0	i. Anl. ISO 527-1.3
Modul 300 %	MPa	9.5	i. Anl. ISO 527-1.3
Reißfestigkeit / Ultimate tensile strength	MPa	32	i. Anl. ISO 527-1.3
Reißdehnung / Elongation at break	%	880	i. Anl. ISO 527-1.3
E-Modul / Modulus of elasticity	MPa	27	ISO 178
Abriebverlust / Abrasion loss	mm ³	28	ISO 4649
Weiterreißwiderstand / Tear propagation resistance	KN/m	75	ISO 34-1
DVR / Compression set 24h/70 °C	%	42	ISO 815
DVR / Compression set 70h/RT	%	18	ISO 815
Rückprallelastizität / Impact resilience	%	63	ISO 4662
MVR 190 °C; 10 kg	ml/10 min	30	ISO 1133
Dichte / Density	Kg/m ³	1130	ISO 1183

Fig. 2

* Siehe Haftungsausschluss für Versuchsprodukte

Spezielle Prüfungen / Special tests: Desmopan® W DP 85085A*

Lagerzeit / Time of storage	Eigenschaften nach Alterung / Properties after aging		
	Modul 100 % (MPa)	Reißfestigkeit (MPa) / Ultimate tensile strength (MPa)	Reißdehnung (%) / Elongation at break (%)
Hydrolyse 80 °C (in Wasser gelagert) / Hydrolysis 80 °C (immersed in water)			
7 d	5.9	29.9	825
14 d	5.9	29.8	842
Wärmealterung 120 °C / Heat aging 120 °C			
100 h	5.7	23.6	857
250 h	5.7	21.3	822
500 h	6.7	19.3	743
Xenon-WOM (0.35 W/m²; 102 min trocken / dry; 18 min Regen / rain)			
14 d	6.2	34.3	844
28 d	6.1	31.8	829
42 d	6.1	30.6	826
Xenon DIN 75202			
3. Zyklus / Cycle	6.2	33.7	839
5. Zyklus / Cycle	6.1	33.8	884

Spezielle Prüfungen: Alle Alterungen erfolgten an zusätzlich UV-stabilisierten Probekörpern.

Special tests: all the aging tests are conducted on specimens with additional UV-stabilization.

Fig. 3

