

Physical properties of ACLACELL®

Essential properties of ACLACELL®

- volume compressibility
- high elasticity
- good abrasion resistance
- good resistance against oils, grease and petrol
- low transverse expansion when compressed low E-modulus
- high tear resistance
- excellent ozone resistance

ACLACELL® is a foamed polyurethane elastomer based on 1,5-naphthylene di-isocyanate (NDI). The mixed cellular structure of open and closed pores leads to a very low E-modulus at a density from 350 kg/m³ to 650 kg/m³.

As far as we know, the material characteristics of ACLACELL® are highly unlikely to be achieved by any other foamed material.

The high compression force, volume compressibility of the material as well as high tensile strength allow a wide range of applications.

The compression curve remains almost linear up to a deflection of 40 %, and then it proceeds progressively upwards.

When using ACLACELL® for active or passive vibration isolation, static deflections of 20 % can be applied in relation to initial height. The material can be dynamically compressed at max. 30 % and in case of short peak loads up to 60 %.

Behaviour of ACLACELL® under compressive load

Quality	Compression stress in N/cm ² at a deflection of					
	20 %	25 %	30 %	35 %	40 %	60 %
2435	12	15	18	21	26	60
2440	18	21	25	29	35	85
2445	24	30	36	41	50	115
2450	33	41	49	57	68	150
2455	43	54	65	76	91	210
2460	54	67	80	94	110	290
2465	65	75	90	100	120	390

Physical properties of ACLACELL®

Properties	Unit	Checked as per*	Quality 2435	Quality 2450	Quality 2460
Density	g/cm ³	DIN ISO 845	0,35	0,50	0,60
Tensile strength	N/mm	ISO 37	3	6	7,5
Elongation at break	%	ISO 37	400	400	400
Tear propagation resistance	N/cm	DIN ISO 34	90	180	250
Shock elasticity	%	ISO 4662	70	70	70
Compression set					
20° C, 70 h	%	DIN ISO 815	5	6,5	7,5
70° C, 24 h	%	DIN ISO 815	9	8	9

* in accordance with the norms

The information given in this specification sheet should provide a general view of the properties of the product. It reflects the actual state of the art and cannot be considered complete. On account of the strong dependence on environmental influences and subsequent treatment the specified values are approximative only. They do not constitute any legally binding assurance concerning the properties of the product or its suitability for a specific application. For the specified application we recommend a practical test to prove the suitability. This specification sheet replaces all previous ones. Since it is not subject to an automatic modification service the user has to verify the actuality when required.