

Durethan® AKV30H3.0

PA66–GF30

30% Glass Reinforced, Injection Molding, Heat Stabilized

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
<i>RHEOLOGICAL PROPERTIES</i>			
	<i>DRY / COND</i>		
Molding shrinkage (parallel)	0.4 / *	%	ISO 294–4
Molding shrinkage (normal)	1.1 / *	%	ISO 294–4
<i>MECHANICAL PROPERTIES</i>			
	<i>DRY / COND</i>		
Tensile modulus	9500 / 6000	MPa	ISO 527–1/–2
Stress at break	185 / 115	MPa	ISO 527–1/–2
Strain at break	3.5 / 6.5	%	ISO 527–1/–2
Flexural modulus	9200 / 5500	MPa	ISO 178
Flexural strength	280 / 185	MPa	ISO 178
Charpy impact strength (+23°C)	75 / 90	kJ/m ²	ISO 179/1eU
Charpy impact strength (–30°C)	60 / 60	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	10 / 15	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (–30°C)	10 / 10	kJ/m ²	ISO 179/1eA
Izod notched impact strength (+23°C)	10 / 15	kJ/m ²	ISO 180/1A
<i>THERMAL PROPERTIES</i>			
	<i>DRY / COND</i>		
Melting temperature (10°C/min)	262 / *	°C	ISO 11357–1/–3
Temp. of deflection under load (1.80 MPa)	240 / *	°C	ISO 75–1/–2
Temp. of deflection under load (0.45 MPa)	250 / *	°C	ISO 75–1/–2
Coeff. of linear therm. expansion (parallel)	0.3 / *	E–4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	0.9 / *	E–4/°C	ISO 11359–1/–2
Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695–11–10
Thickness tested	1.5 / *	mm	IEC 60695–11–10

Property Data

Durethan® AKV30H3.0

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10
Burning Behav. at 0.75 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
Glow Wire Flammability Index GWFI	700 / –	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	0.75 / –	mm	IEC 60695-2-12
Glow Wire Flammability Index GWFI	700 / –	°C	IEC 60695-2-12
GWFI (Thickness (2) tested)	1.5 / –	mm	IEC 60695-2-12
Glow Wire Ignition Temperature GWIT	725 / –	°C	IEC 60695-2-13
GWIT (Thickness (1) tested)	0.75 / –	mm	IEC 60695-2-13
Glow Wire Ignition Temperature GWIT	725 / –	°C	IEC 60695-2-13
GWIT (Thickness (2) tested)	1.5 / –	mm	IEC 60695-2-13

ELECTRICAL PROPERTIES

DRY / COND

Relative permittivity (100Hz)	4.5 / 9	–	IEC 62631-2-1
Relative permittivity (1 MHz)	4 / 4.5	–	IEC 62631-2-1
Dissipation factor (100 Hz)	250 / 1470	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	240 / 730	E-4	IEC 62631-2-1
Volume resistivity	1E13 / 1E10	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric strength	40 / 39	kV/mm	IEC 60243-1
Comparative tracking index	525 / –	V	IEC 60112

OTHER PROPERTIES

DRY / COND

Water absorption	5.5 / *	%	Sim. to ISO 62
Humidity absorption	1.9 / *	%	Sim. to ISO 62
Density	1360 / –	kg/m ³	ISO 1183

PROCESSING RECOMMENDATIONS

VALUE

Property Data

Durethan® AKV30H3.0

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Drying temperature dry air dryer	80	°C	
Drying time dry air dryer	2–6	h	
Residual moisture content	0.03–0.12	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	280–300	°C	
Mold temperature	80–120	°C	