

AKROMID® A3 ICF 40 black (5116)

Polyamide 66

AKRO-PLASTIC GmbH

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

AKROMID® A3 ICF 40 black (5116) is a 40% carbon fibre reinforced polyamide 6.6 with high flexural strength and good sliding properties

Mechanically high stressed parts in all industries

General

Material Status	• Commercial: Active
Search for UL Yellow Card	• AKRO-PLASTIC GmbH • AKROMID®
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Carbon Fiber, 40% Filler by Weight
Features	• High Strength
Appearance	• Black
Resin ID (ISO 1043)	• PA66 CF40

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.34	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.20	--	%	
Humidity Absorption - 62% RH (70°C)	1.5	--	%	ISO 1110
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	33000	20000	MPa	ISO 527-2/1
Tensile Stress (Break)	270	200	MPa	ISO 527-2/5
Tensile Strain (Break)	1.5	2.5	%	ISO 527-2/5
Flexural Modulus ²	30000	22000	MPa	ISO 178
Flexural Stress ²	370	300	MPa	ISO 178
Flexural Strain at Break ³	1.8	2.5	%	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	7.0	--	kJ/m ²	
23°C	9.0	12	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	55	--	kJ/m ²	
23°C	60	70	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	265	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	255	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	235	--	°C	ISO 75-2/C
Melting Temperature ⁴	262	--	°C	DIN EN 11357-1
CLTE				ISO 11359-2
Flow : 23 to 80°C	4.0E-6	--	cm/cm/°C	
Transverse : 23 to 80°C	7.8E-5	--	cm/cm/°C	
Thermal Conductivity	0.47	--	W/m/K	DIN 52612
Temperature Index				IEC 60216
50% Loss of Tensile Strength, 20000 hr	130	--	°C	
50% Loss of Tensile Strength, 5000 hr	155	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+3	1.0E+3	ohms	IEC 60093



AKROMID® A3 ICF 40 black (5116)

Polyamide 66

AKRO-PLASTIC GmbH

PROSPECTOR®

www.ulprospector.com

Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate ⁵ (1.00 mm)	< 100	--	mm/min	FMVSS 302
Flame Rating (1.6 mm)	HB	--		UL 94
Additional Information	Dry	Conditioned	Unit	Test Method
Flowability ⁶ (2.00 mm)	360	--	mm	Internal Method
Reinforcement Content	40	--	%	ISO 1172

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 mm/min

³ 2 mm/min

⁴ 10°C/min

⁵ >1 mm

⁶ 8.4 x 2 mm



AKROMID® A3 ICF 40 black (5116)

Polyamide 66

AKRO-PLASTIC GmbH

PROSPECTOR®

www.ulprospector.com

Where to Buy

Supplier

AKRO-PLASTIC GmbH

, Germany

Telephone: +49-2636-9742-0

Web: <http://www.akro-plastic.com/>

Distributor

Please contact the supplier to find a distributor for AKROMID® A3 ICF 40 black (5116)

