## DIAMALOY ENGINEERED ALLOYS ABS NYLON 4010A

Acrylonitrile Butadiene Styrene + Nylon

Network Polymers, Inc.

## Message:

DIAMALOY ENGINEERED ALLOYS ABS NYLON 4010A is an Acrylonitrile Butadiene Styrene + Nylon (ABS+Nylon) product. It can be processed by injection molding and is available in North America. Characteristics include: REACH Compliant ROHS Compliant WEEE Compliant Good Weather Resistance

General Information			
Features	Good Weather Resistance		
Agency Ratings	EC 1907/2006 (REACH)		
	EU 2002/96/EC (WEEE)		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.09	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) <sup>1</sup> (265°C/5.0			
kg)	37	g/10 min	ASTM D1238
Molding Shrinkage - Flow (23°C, 3.18 mm, Injection Molded)	0.50 to 0.70	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, 23°C, 3.18 mm, Injection Molded	42.2	MPa	
Yield, 23°C, 3.18 mm, Injection Molded	43.6	MPa	
Break, 23°C, 3.18 mm, Injection Molded	35.9	MPa	
Break, 23°C, 3.18 mm, Injection Molded	39.4	MPa	
Tensile Elongation <sup>2</sup>			ASTM D638
Yield, 23°C, 3.18 mm, Injection Molded <sup>3</sup>	3.7	%	
Yield, 23°C, 3.18 mm, Injection Molded <sup>4</sup>	3.6	%	
Break, 23°C, 3.18 mm, Injection Molded 5	15	%	
Break, 23°C, 3.18 mm, Injection Molded	200	%	
Flexural Modulus - Tangent <sup>7</sup> (23°C, 3.18 mm, Injection Molded, 50.8 mm Span)	1480	MPa	ASTM D790B

Impact	Nominal Value	Unit	Test Method
Notched lzod Impact (23°C, 3.18 mm, Injection Molded)	No Break		ASTM D256A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 3.18 mm, Injection			
Molded)	52.8	°C	ASTM D648
Vicat Softening Temperature	143	°C	ASTM D1525 <sup>8</sup>
Injection	Nominal Value	Unit	
Drying Temperature	80.0 to 85.0	°C	
Drying Time	4.0 to 6.0	hr	
Suggested Max Moisture	0.10	%	
Suggested Shot Size	40 to 70	%	
Suggested Max Regrind	25	%	
Rear Temperature	230 to 260	°C	
Middle Temperature	232 to 260	°C	
Front Temperature	235 to 260	°C	
Nozzle Temperature	220 to 260	°C	
Processing (Melt) Temp	220 to 260	°C	
Mold Temperature	71.1 to 82.2	°C	
Injection Rate	Fast		
Back Pressure	0.517 to 1.03	MPa	
NOTE			
1.	Procedure A		
2.	51 mm/min		
3.	double gate		
4.	single gate		
5.	double gate		
6.	single gate		
7.	Method I (3 point load), 1.3 mm/min		
8.	Rate B (120°C/h), Loading 1 (10 N)		

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## Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519 Phone: +86 13424755533 Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

