



QUADRA

Quadrasil ARCS

AROMATIC POLYCARBONATE TPU -
POLYSILOXANE COPOLYMER

TECHNICAL DATA & PROCESS GUIDE

PRODUCT

Quadrasil ARCS

CHEMISTRY

Aromatic Polycarbonate TPU - Polysiloxane Copolymer

APPLICATIONS

Extrusion, Injection Molding, Solution

CHARACTERISTICS

Superior hemocompatibility, superior biocompatibility, superior chemical resistance.



QUADRASIL ARCS

Quadrasil™ ARCS is a family of aromatic polycarbonate polyurethane-polysiloxane copolymers. It offers superior hemocompatibility, biocompatibility and superior chemical resistance for use in long term blood contacting and body implantable applications. It is naturally clear, hemocompatible, and is USP Class VI and ISO-10993 compliant. Quadrasil™ ARCS is used across a wide range of medical applications including chronic indwelling catheters, extracorporeal life support cannulae, coatings, sensors, and other applications where superior hemocompatibility, chemical resistance, and/or fouling resistance is required.

QUADRASIL ARCS PROPERTIES

Product & Properties	ASTM -Test	ARCS-70A	ARCS-75A	ARCS-80A	ARCS-85A	ARCS-90A	ARCS-95A	ARCS-55D	ARCS-60D	ARCS-70D
Durometer Hardness	D2240	70A	75A	80A	85A	90A	95A	55D	60D	80D
Specific Gravity	D792	1.15	1.15	1.16	1.16	1.17	1.17	1.18	1.20	1.20
Flex Module (psi)	D790	700	1000	1500	3000	5500	10000	25000	38000	55000
Ultimate tensile (psi)	D412	3500	4000	4800	5500	5800	6000	6500	6800	7300
Ultimate elongation (%)	D412	500	475	450	425	400	380	350	300	200
Tensile at 100% (psi)	D412	550	700	1200	2100	2200	2400	2800	3100	3900
Tensile at 300% (psi)	D412	1900	2200	2800	3100	3500	4500	4800	6800	N/A
Mold Shrinkage (in/in)	D955	.008-.012	.008-.012	.008-.012	.008-.012	.008-.012	.008-.012	.008-.012	.008-.012	.008-.012



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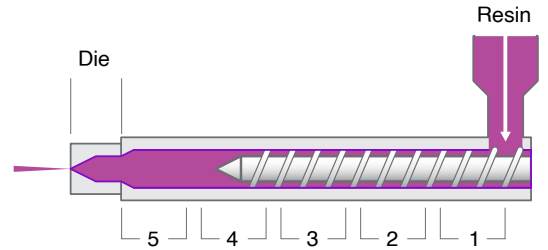
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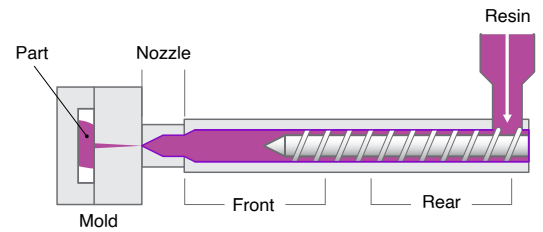
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QUADRASIL EXTRUSION TEMPERATURE PROFILE

	ARCS-70A	ARCS-75A	ARCS-80A	ARCS-85A	ARCS-90A	ARCS-95A	ARCS-55D	ARCS-60D	ARCS-70D
	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
Zone 1	350/177	350/177	360/182	360/182	370/177	375/191	380/193	380/193	380/193
Zone 2	370/188	370/188	380/193	380/193	390/199	395/202	390/199	390/199	400/204
Zone 3	380/193	380/193	390/199	390/199	400/204	405/207	410/210	410/210	415/213
Zone 4	400/204	400/204	410/210	410/210	420/216	420/216	425/218	425/218	430/221
Adapter 5	400/204	400/204	415/213	415/213	425/218	420/216	425/218	425/218	430/221
Die	400-420/ 204-216	400-420/ 204-216	415-435/ 213-224	415-435/ 213-224	425-445/ 218-229	420-440/ 216-227	425-445/ 218-229	425-445/ 218-229	430-450/ 221-232



QUADRASIL ARCS INJECTION MOLDING TEMPERATURE PROFILE

	ARCS-70A	ARCS-75A	ARCS-80A	ARCS-85A	ARCS-90A	ARCS-95A	ARCS-55D	ARCS-60D	ARCS-70D
	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
Rear	380	380	385	385	400	400	400	405	410
Front	390	390	395	395	405	405	405	415	420
Nozzle	400	400	405	405	410	410	410	420	425
Melt	400	400	405	405	410	410	410	415	420
Mold	80-100	80-100	80-100	80-100	80-100	80-100	80-100	70-90	60-80

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HANDLING & DRYING

Quadrasil ARCS is hygroscopic, meaning the material will absorb and react with moisture in the atmosphere, and requires proper drying prior to processing. Moisture in the material will adversely affect the process parameters and end product physical properties. Materials should be properly dried in a desiccant dehumidifying hopper dryer prior to processing. Airflow to the hopper should be at least 1 cubic foot pound per minute for every pound of resin per hour at a dew point -40 F or less. It is also recommended that a machine mounted hopper drier be used. Material should be dried until the moisture content is less than 0.03% by weight. Recommended drying temperatures at times are listed in the table below by material grade.

QUADRASIL ARCS RECOMMENDED DRYING TEMPERATURE

	ARCS-70A	ARCS-75A	ARCS-80A	ARCS-85A	ARCS-90A	ARCS-95A	ARCS-55D	ARCS-60D	ARCS-70D
°F	130	135	140	140	145	150	160	160	160
°C	54	57	60	60	63	67	71	71	71

NOTE

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