

# Syensqo

## PPSU

### R-5000 CL 301

Product information				
Manufacturer		SYENSQO		
Color		CL		
Material Shape		Pellets		
Process		Injection molding Extrusion molding Blow molding Thermoforming Machining		
FR		V-0 5VA		
Material Attribute		Flame retardant Film grade Sheet grade Profile grade Heat stabilized grade High heat resistance grade Hydrolysis stabilized grade Drinking water contact grade Food Contact grade Medical grade		
Features		Steam resistantHeat Aging resistantHigh toughnessAnti gamma rayRadiation SterilizableSteam sterilizableAcid resistantAutoclave sterilizableAlkali-resistingBiocompatibleChemical ResistantDetergent resistantE-beam sterilizableEtO sterilizableGeneral purpose gradeDimensional stabilityGood electrical propertiesGood sterilizabilityHeat sterilizableStress crack resistanceHigh heat resistanceRadio translucent		
Application		Medical devicesFood service applicationsAutomotive applicationsDental applicationsSurgical instrumentsDiaphragmsMedical healthcare applications		
Electrical properties	Condition	Standard	Value	Unit
Dielectric	Strength	ASTM D149	14	KV/mm
Volume	Resistivity	ASTM D257	9E+15	Ω.cm
Extrusion molding	Condition	Standard	Value	Unit
Adapter	Temperature	327~371	°C	
Die	Temperature	327~371	°C	
Dry	Temperature	171	°C	
Dry	Time	4.0	hr	
Melt	Temperature	343~399	°C	
Zone	1 Temperature	338~388	°C	
Zone	2 Temperature	338~388	°C	
Zone	3 Temperature	338~388	°C	
Zone	4 Temperature	338~388	°C	
Zone	5 Temperature	338~388	°C	
Flammability	Condition	Standard	Value	Unit
Flame	Rating NC 0.36mm	UL94	V-0	
Flame	Rating All Color 0.75mm	UL94	V-0	
Flame	Rating All Color 1.5mm	UL94	V-0	
Flame	Rating All Color 3.0mm	UL94	V-0	
Mechanical behavior	Condition	Standard	Value	Unit
Elongation	Yield 3.2mm	ASTM D638	7.2	%

Elongation	Break 3.2mm	ASTM D638	60~120	%
Flexural	Strength 5.0%Strain 3.2mm	ASTM D790	91.0	MPa
Flexural	Modulus 3.2mm	ASTM D790	2410	MPa
Izod	Notch Impact 3.2mm	ASTM D256	690	J/m
Tensile	Modulus 3.2mm	ASTM D638	2340	MPa
Tensile	Strength 3.2mm	ASTM D638	69.6	MPa
Tensile	Impact Strength 3.2mm	ASTM D1822	399	kJ/m <sup>2</sup>
Optical performance	Condition	Standard	Value	Unit
Refractive	Index	ASTM D542	1.672	
Physical property	Condition	Standard	Value	Unit
Density		ASTM D792	1.29	g/cm <sup>3</sup>
Melt	Index 365°C 5kg	ASTM D1238	14~20	g/10min
Shrinkage	Flow 3.2mm	ASTM D955	0.70	%
Water	Absorption 24hr	ASTM D570	0.37	%
Water	Absorption Equilibrium	ASTM D570	1.1	%
Thermal	Condition	Standard	Value	Unit
CLE	Flow 3.2mm	ASTM D696	5.6E-5	cm/cm/°C
Glass	Transition Temperature	ASTM E1356	220	°C
HDT	Unannealed 1.8MPa 3.2mm	ASTM D648	207	°C
UL	Condition	Standard	Value	Unit
Arc	Resistance	ASTM D495	5	PLC
Comparative	Tracking Index	IEC 60112	5	PLC
HAI	NC 0.36mm	UL 746A	0	PLC
HAI	ALL 0.75mm	UL 746A	0	PLC
HAI	ALL 1.5mm	UL 746A	0	PLC
HAI	ALL 3.0mm	UL 746A	0	PLC
HVTR		UL 746A	0	PLC
HWI	NC 0.36mm	UL 746A	0	PLC
HWI	ALL 0.75mm	UL 746A	0	PLC
HWI	ALL 1.5mm	UL 746A	0	PLC
HWI	ALL 3.0mm	UL 746A	0	PLC
RTI	Elec NC 0.36mm	UL 746B	160	°C
RTI	Elec ALL 0.75mm	UL 746B	180	°C
RTI	Elec ALL 1.5mm	UL 746B	180	°C
RTI	Elec ALL 3.0mm	UL 746B	180	°C
RTI	Imp NC 0.36mm	UL 746B	160	°C
RTI	Imp ALL 0.75mm	UL 746B	170	°C
RTI	Imp ALL 1.5mm	UL 746B	170	°C
RTI	Imp ALL 3.0mm	UL 746B	170	°C
RTI	Str NC 0.36mm	UL 746B	160	°C
RTI	Str ALL 0.75mm	UL 746B	180	°C
RTI	Str ALL 1.5mm	UL 746B	180	°C

RTI	Str	ALL 3.0mm	UL 746B	180	°C
UL	FlameRating	NC 0.36mm	UL94	V-0	
UL	FlameRating	ALL 0.75mm	UL94	V-0	
UL	FlameRating	ALL 1.5mm	UL94	V-0	
UL	FlameRating	ALL 3.0mm	UL94	V-0	