



Professional Plastics, Inc. (888) 995-7767 [sales@proplas.com](mailto:sales@proplas.com)

**Acetron® GP Acetal, Unfilled, porosity-free copolymer acetal, extruded**

Search Categories: Acetal; Bearing; FDA Approved

**Material Notes:** Acetron GP is Quadrant EPP's general purpose acetal and is the only porosity-free acetal product available today. Investments in process technology by Quadrant EPP now provide the performance and machinability of acetal without center core porosity. Our in-line photometric quality procedure assures every plate and rod is porosity-free as measured by Quadrant EPP's quick check dye penetrant test. For details of test methods, contact Quadrant EPP. Acetron GP natural is FDA, USDA, NSF, Canada AG and 3A-Dairy compliant.

MECHANICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Specific Gravity	1.41	ASTM D792	1.41
Tensile Strength, psi	9500	ASTM D638	66 MPa
Tensile Modulus, psi	400000	ASTM D638	2,758 MPa
Elongation, %	30	ASTM D638	30 %
Flexural Strength, psi	12000	ASTM D790	83 MPa
Flexural Modulus, psi	400000	ASTM D790	2,758 MPa
Shear Strength, psi	8000	ASTM D732	55 MPa
Compressive Strength, psi	15000	ASTM D695, 10% Def.	103 MPa
Compressive Modulus, psi	400000	ASTM D695	2,758 MPa
Hardness, Rockwell M	88	ASTM D785	88
Hardness, Rockwell R	120	ASTM D785	120
Hardness, Durometer, Shore D Scale	85	ASTM D2240	85
Izod Impact (Notched), ft-lb/in	1	ASTM D256 Type A	53 J/m
Coefficient of Friction, Dynamic	0.25	Dry vs. Steel, QTM55007	0.25
Limiting PV, psi-fpm	2700	4:1 safety factor; QTM 55007	0.09 MPa-m/sec
k (wear) factor, 10 <sup>-10</sup> in <sup>3</sup> -min/lb-ft-hr	200	QTM 55010	200 10 <sup>-10</sup> in <sup>3</sup> -min/lb-ft-hr
Relative Machinability	1	1-10, 1=Easier to Machine	1
THERMAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Coefficient of Thermal Expansion, 10E-4/°F	0.54	ASTM E831 (-40°F to 300°F)	0.97 10 <sup>-4</sup> /K
Deflection Temperature 264 psi, °F	220	ASTM D648	104 °C
Melting Point (Crystalline) Peak, °F	335	ASTM D3418	168 °C
Continuous Service in Air (Max), °F	180	Long Term	82 °C
Thermal Conductivity, BTU-in/hr-ft <sup>2</sup> -°F	1.6	ASTM F433	0.23 W/m-K
ELECTRICAL PROPERTIES	VALUES	COMMENTS	METRIC VALUES
Dielectric Strength, Short Term, Volts/mil	420	ASTM D149	17 kV/mm
Surface Resistance, Ohm/Square	1E+13	Lower Limit; EOS/ESD S11.11	1E+13 Ohm/Square

Dielectric Constant, 1 MHz	3.8	ASTM D150	3.8
Dissipation Factor, 1 MHz	0.005	ASTM D150	0.005
CHEMICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Water Absorption Immersion, 24 hr., %	0.2	ASTM D570(2)	0.2 %
Water Absorption Immersion Sat, %	0.9	ASTM D570(2)	0.9 %
Acids, Weak (acetic, dilute HCl)	2	Limited Service	2
Acids, Strong (conc. HCl or sulfuric)	1	Unacceptable	1
Alkalies, Weak (dilute NaOH)	3	Acceptable Service	3
Alkalies, Strong (conc. NaOH)	1	Unacceptable	1
Hydrocarbons, Aromatic (toluene)	3	Acceptable Service	3
Hydrocarbons, Aliphatic (gasoline)	3	Acceptable Service	3
Ketones, Esters (acetone)	3	Acceptable Service	3
Ethers (diethyl ether, THF)	3	Acceptable Service	3
Chlorinated Solvents (methylene chloride)	2	Limited Service	2
Alcohols (methanol, anti-freeze)	3	Acceptable Service	3
Continuous Sunlight	2	Limited Service	2
COMPLIANCE	ENGLISH VALUES	COMMENTS	METRIC VALUES
Flammability, UL94 (5=V-0; 4=V-1; 3=V-2; 1=HB)	1 (HB)	UL94; 1/8 inch	1
FDA (1=Yes)	1	Compliant	1

## **PROFESSIONAL PLASTICS, INC.**

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