

# RÖCHLING datasheet

SUSTANAT | 2009

## SUSTANAT PC, SUSTANAT PC GF20 & SUSTANAT PC OPTICAL

SUSTANAT PC (polycarbonate machine grade) is ideally suited for applications that demand high impact strength. It is an amorphous, transparent product that exhibits good electrical and mechanical properties along with excellent dimensional stability. SUSTANAT PC GF 20 has improved stiffness, tensile strength and a lower coefficient of linear thermal expansion. SUSTANAT PC OPTICAL is available in sheets from 5/8" to 2" thick (48" x 96") and is widely used as safety shields and viewing ports in the semiconductor industry and on various types of heavy machinery.

### Product Features:

- ⇒ Continuous use temperature of 250° F
- ⇒ Transparent
- ⇒ High impact strength
- ⇒ Good electrical insulation
- ⇒ Very high toughness to -20° F properties
- ⇒ Easy to machine to close tolerances
- ⇒ Intrinsic flame retardant
- ⇒ High mechanical retention at elevated temperatures

### Typical Properties of Stock Shapes

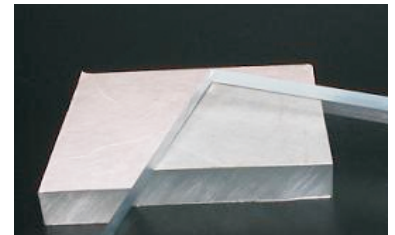
Property	Units	Test Method	Value Natural	Value GF20	Value Optical
Specific Gravity	-	ASTM D 792	1.2	1.35	1.2
Water Absorption 24 hrs	%	ASTM D 570	0.15	0.16	0.15
Water Absorption Saturation	%	ASTM D 570	0.35	0.29	0.35
Flammability	-	UL 94	V-0	V-1	V-0
Tensile Strength	psi	ASTM D 638	10,000	16,000	10,000
Elongation	%	ASTM D 638	75	6	75
Modulus	psi	ASTM D 638	320,000	860,000	320,000
Flexural Strength	psi	ASTM D 790	13,000	19,000	13,000
Modulus	psi	ASTM D 790	340,000	800,000	340,000
Notched Izod	ft-lb/in	ASTM D 256	10	2	10
Rockwell Hardness	-	ASTM D 785	M75	M91	M75
HDT @ 264 psi	°F	ASTM D 648	280	295	280
Coefficient Linear thermal expansion	in/in/°F	ASTM D 696	3.80 x 10 <sup>-5</sup>	1.5 x 10 <sup>-5</sup>	3.80 x 10 <sup>-5</sup>
Dielectric Strength	V / mil	ASTM D 149	380	490	380
Volume Resistivity	ohm-cm	ASTM D 257	>10 <sup>13</sup>	10 <sup>17</sup>	>10 <sup>13</sup>
Dielectric Constant	-	ASTM D 150	3.2	3.13	3.2

### Typical Applications

- ⇒ Impact guards
- ⇒ Electrical components
- ⇒ Fluid handling parts
- ⇒ Manifolds
- ⇒ Instrument components
- ⇒ View ports
- ⇒ Site glasses

### Certifications

- ⇒ ASTM D3935 PC 0111
- ⇒ ASTM D6098 PC 0111
- ⇒ LP 393A
- ⇒ Natural meets FDA 21 CFR 177.1582



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