

**HEAT    Chemical Resistance    Flame&Smoke    Agency Listings**

The unique performance advantages of Chlorinated Poly-Vinyl Chloride (CPVC) are available for processing on conventional vinyl extrusion equipment with TempRite SP compounds exclusively from Lubrizol, the world leader in CPVC markets and technology.

Advances in CPVC extrusion material technology now allow cost effective replacement of expensive engineering resins, and value added substitution where commodity thermoplastics do not perform. With Class 1 or A flame and smoke performance, SP220 is ideally suited for applications in regulated environments that specify materials with low combustion and high smoke suppression.

Lubrizol's technical center offers a full range of design, engineering, technical support services, and on-site processing assistance to shorten the application development cycle and accelerate commercialization. Sales offices in 11 worldwide locations offer unequaled service and support.

TempRite® SP materials are available in made to stock colors directly from Lubrizol's global distribution network. Custom colors are also available. Packaging options include boxes and bulk shipment.

	END USE BENEFIT	PROCESSING BENEFIT
<b>MATERIAL PERFORMANCE</b>	<ul style="list-style-type: none"> <li>• Class 1 or A flame and smoke performance (E-84 Steiner tunnel flame spread &lt; 25, smoke developed &lt; 450) for regulated environments.</li> <li>• Inherent UL 94 5Va performance for applications requiring low flame spread.</li> <li>• Broad chemical resistance for use in corrosive environments, for example, in presence of strong acids and bases.</li> </ul>	<ul style="list-style-type: none"> <li>• Low die swell for near net-shape tools and expedited balancing.</li> <li>• Excellent metal release and PVC like melt temperatures promote long run lives.</li> <li>• Suitable for common secondary operations such as machining and painting.</li> </ul>
<b>COST</b>	<ul style="list-style-type: none"> <li>• Tight dimensional tolerances during processing of complicated shapes for parts consolidation.</li> <li>• Multiple polymer co-extrusion capability for further parts consolidation.</li> </ul>	<ul style="list-style-type: none"> <li>• Enhanced metal release and processing stability for greater tool life.</li> <li>• Post-processor recyclable for efficient material usage.</li> </ul>
<b>QUALITY</b>	<ul style="list-style-type: none"> <li>• Improved processability produces consistent looking parts.</li> <li>• Smooth and polished finish for a high quality appearance part.</li> </ul>	<ul style="list-style-type: none"> <li>• Wide processing window products consistent looking parts in high and low shear conditions</li> <li>• Low extruded-in stress for reduced stress relaxation and maintenance of dimensional integrity.</li> </ul>

**PROPERTY TABLE ON REVERSE SIDE**

June 4, 2007

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. The SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.

**Lubrizol Advanced Materials, Inc.**  
9911 Brecksville Road  
Cleveland, OH 44141-3247  
800-380-5397  
[www.tempritecpvc.com](http://www.tempritecpvc.com)

PROPERTY	TEST METHOD	TYPICAL VALUES FOR TESTED LOTS SP220 UNITS	
<b>FLAMMABILITY</b> V-0 5Va  Steiner Tunnel 0.060" (1.5 mm) Flame Spread Index 0.060" (1.5 mm) Smoke Developed Index	UL 94 UL 94  ASTM E-84	0.040 in / 1.0 mm min 0.060 in / 1.5 mm min  15 290	
<b>THERMAL</b> Heat deflection under load 264 psi, 1/8" bar unannealed  264 psi, 1/8" bar annealed  Vicat softening, method B (1kg)  Coefficient of thermal expansion -30 to +30°C	ASTM D-648   ASTM D-1525  ASTM D-696	217 103 222 106 261 127 4.0 7.3	°F °C °F °C °F °C x10 <sup>-5</sup> in/in-°F x10 <sup>-5</sup> cm/cm-°C
<b>MECHANICAL</b> Tensile strength (73°F / 23°C) At yield Tensile modulus (73°F / 23°C)  Flexural strength (73°F / 23°C)  Flexural modulus (73°F / 23°C)  Compressive strength (73°F / 23°C)  Compressive modulus (73°F / 23°C)  Hardness, Rockwell R	ASTM D-638  ASTM D-638  ASTM D-790  ASTM D-790  ASTM D-695  ASTM D-790  ASTM D-785	6,500 45 326,000 2,250 12,000 82 335,000 2,300 8,900 61 212,000 1,500 112	psi MPa psi MPa psi MPa psi MPa psi MPa psi MPa
<b>IMPACT</b> Notched izod 1/8" bar @ 73°F Variable height 3/8" diameter TUP @ 73°F	ASTM D-256  ASTM D-4226	5.4 290 0.9 4	ft-lb/in J/m in-lb/mil kJ/m
<b>PHYSICAL</b> Specific gravity Black 293 White 110 Gray 240 Natural 021	ASTM D-792	1.50 1.52 1.52 1.47	