

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 CIM 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. End-use and processing advantages make TempRite® CIM CPVC ideally suited for many applications. Mechanical property retention at elevated temperatures, broad chemical resistance, excellent electrical properties and superior UL 94 5Va flame performance make CPVC a uniquely performing engineering thermoplastic.

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 unequalled service and support. TempRite® CIM 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
MATERIAL PERFORMANCE	<ul style="list-style-type: none"> • HDT's from 190-220°F for mechanical property retention at elevated service temperatures. • Superior UL 94 5Va performance for applications requiring low flame spread. • Broad chemical resistance for use in corrosive environments, for example, in presence of strong acids and bases. 	<ul style="list-style-type: none"> • High melt flow index for low cycle times in complex parts. • Reduced shear sensitivity promotes longer run life. • Suitable for common secondary operations such as machining and painting.
COST	<ul style="list-style-type: none"> • Improved processing in complex parts reduces cycle times and scrap rates. • Suited to tooling designed for good practice molding of most amorphous thermoplastics. 	<ul style="list-style-type: none"> • Enhanced flow and processing stability for greater tool life. • Post-processor recyclable for efficient material usage.
QUALITY	<ul style="list-style-type: none"> • Improved processability produces consistent looking parts. • Smooth and polished finish for a high quality appearance part. 	<ul style="list-style-type: none"> • Low extruded-in stress for reduced stress relaxation and maintenance of dimensional integrity.

PROPERTY TABLE ON REVERSE SIDE

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PROPERTY	TEST METHOD	TYPICAL VALUES FOR TESTED LOTS	
		CIM 190	UNITS
THERMAL Heat deflection under load 264 psi, 1/8" bar annealed 264 psi, 1/8" bar unannealed Vicat softening, method A (5kg) Vicat softening, method B (1kg) Coefficient of thermal expansion -30 to +30°C	ASTM D-648 ASTM D-1525 ASTM D-1525 ASTM D-696	194 90 168 76 192 89 219 104 3.8 6.9	°F °C °F °C °F °C °F °C x10 ⁻⁵ in/in-°F x10 ⁻⁵ cm/cm-°C
MECHANICAL 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) Hardness, Rockwell R	ASTM D-638 ASTM D-638 ASTM D-790 ASTM D-790 ASTM D-785	6,500 45 350,000 2,400 11,700 80 350,000 2,400 107	psi MPa psi MPa psi MPa psi MPa
IMPACT Notched izod 1/8" bar @ 73°F	ASTM D-256	10.0 540	ft-lb/in J/m
PHYSICAL Specific gravity Black 291 Gray 245 Melt Index 215°C, 10.1 kg load Mold shrinkage Water absorption 24 hrs @ 23°C	ASTM D-792 ASTM D-1238 ASTM D-955 ASTM D-570	1.38 1.45 17.0 0.004 0.16	g/10 min in/in % wt. chg.
FLAMMABILITY V-0 (minimum thickness tested) 5Va (minimum thickness tested)	UL 94 UL 94	0.060 1.47 0.060 1.47	in mm in mm