

# THERMOLAST® K TC5GPZ (Series: GP/HM)

Styrene Ethylene Butylene Styrene Block Copolymer  
KRAIBURG TPE Corporation

**PROSPECTOR®**

www.ulprospector.com

## Technical Data

### Product Description

#### TYPICAL APPLICATIONS:

- design-functional elements: packaging
- automotive indoor and under the hood: anti-slip-mats, air-run-channels, air-water-channels
- soft touch: tracer, push buttons, switches
- handles: screwdriver, toolbox, ski and hiking sticks

#### MATERIAL ADVANTAGES

- excellent mechanical properties
- excellent physical properties
- natural compounds easy to colour
- meets odour specification for automotive interior
- good weather resistance for black compounds
- listed according to UL94HB
- very good flow characteristics
- adhesion to PP

#### PROCESSING

- like polyolefine
- processing temperature 180 °C to 220 °C (max. 250 °C)
- preferably high injection and pressure

### General

Material Status	• Commercial: Active		
Literature <sup>1</sup>	<ul style="list-style-type: none"> <li>• Processing - Extrusion (English)</li> <li>• Processing - Injection (English)</li> <li>• Technical Datasheet (English)</li> </ul>		
UL Yellow Card <sup>2</sup>	<ul style="list-style-type: none"> <li>• E353857-101117931</li> <li>• E214822-586887</li> </ul>		
Search for UL Yellow Card	<ul style="list-style-type: none"> <li>• KRAIBURG TPE Corporation</li> <li>• THERMOLAST® K</li> </ul>		
Availability	• Asia Pacific	• Europe	• North America
Features	<ul style="list-style-type: none"> <li>• General Purpose</li> <li>• Good Adhesion</li> </ul>	<ul style="list-style-type: none"> <li>• Good Flow</li> <li>• Good Weather Resistance</li> </ul>	• Low to No Odor
Uses	<ul style="list-style-type: none"> <li>• Automotive Applications</li> <li>• Automotive Interior Parts</li> <li>• Automotive Under the Hood</li> </ul>	<ul style="list-style-type: none"> <li>• General Purpose</li> <li>• Handles</li> <li>• Packaging</li> </ul>	<ul style="list-style-type: none"> <li>• Soft Touch Applications</li> <li>• Switches</li> </ul>
Appearance	• Black		
Processing Method	• Injection Molding		

Physical	Nominal Value Unit	Test Method
Density	1.10 g/cm <sup>3</sup>	ISO 1183
Elastomers	Nominal Value Unit	Test Method
Tensile Stress <sup>4</sup> (Yield)	6.00 MPa	ISO 37
Tensile Elongation <sup>4</sup> (Break)	650 %	ISO 37
Tear Strength <sup>5</sup>	14 kN/m	ISO 34-1
Compression Set		ISO 815
23°C, 72.0 hr	14 %	
70°C, 22.0 hr	35 %	
100°C, 22.0 hr	69 %	
Hardness	Nominal Value Unit	Test Method
Shore Hardness (Shore A)	50	ISO 868
Flammability	Nominal Value Unit	Test Method
Flame Rating	HB	UL 94



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Injection	Nominal Value Unit
Drying Temperature	60.0 to 80.0 °C
Drying Time	2.0 to 4.0 hr
Rear Temperature	180 °C
Middle Temperature	200 °C
Front Temperature	220 °C
Mold Temperature	25.0 to 40.0 °C
Injection Pressure	5.00 to 40.0 MPa
Injection Rate	Fast
Back Pressure	2.00 to 5.00 MPa

## Injection Notes

Hot Runner Temperature: 200 to 250°C  
Hot runner should be empty after a maximum of 2 to 3 shots.  
With materials <50 Shore A the use of a needle seal nozzle is advisable.

Extrusion	Nominal Value Unit
Drying Temperature	60.0 to 80.0 °C
Drying Time	2.0 to 4.0 hr
Cylinder Zone 1 Temp.	140 °C
Cylinder Zone 2 Temp.	150 °C
Cylinder Zone 3 Temp.	160 °C
Die Temperature	180 to 190 °C

## Extrusion Notes

L/D Ratio: 25:1  
Compression Ratio: 3.5:1  
Mold Clamping Zone: 3 to 5 mm  
Extruder Heat Temperature: 170°C

## Notes

- <sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.
- <sup>2</sup> A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.
- <sup>3</sup> Typical properties: these are not to be construed as specifications.
- <sup>4</sup> Type S2, 200 mm/min
- <sup>5</sup> Method Bb, Angle (Nicked)



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### Where to Buy

#### Supplier

##### **KRAIBURG TPE Corporation**

Duluth, GA USA

**Telephone:** 678-584-5020

**Web:** <http://www.kraiburgtpe.com/>

#### Distributor

##### **Chase Plastic Services, Inc.**

*Chase Plastics Services is a North American distributor with representatives throughout the region. Please find your rep here:*

<http://www.chaseplastics.com/contact/locations>

**Telephone:** 800-232-4273

**Web:** <http://www.chaseplastics.com/>

**Availability:** North America

