# Globalene® TPV 1087A BK

## Thermoplastic Vulcanizate

Lee Chang Yung Chemical Industry Corp.

### Message:

A medium-high hardness, multi-purpose thermoplastic elastomer featuring excellent compression set and high temperature performance. Globalene® TPV 1087A BK can be processed by extrusion or molding for applications such as weatherstrip profile, seals, window gaskets and other soft touch articles.

Globalene® TPV is a fully vulcanized Thermoplastic Elastomers containing EPDM and PP.

It is designed for applications requiring long term sealing performance at elevated temperatures.

Suitable for injection molding, profile extrusion or re-compounding for plastics modification.

Conventional thermoplastic processing equipment can be used.

#### Applications:

Globalene® TPV has quality sealing property, good chemical and weathering resistance and electrical property that is suitable to replace main stream TPV, thermoset EPDM rubber, Styrene based TPEs, flexible PVC and other TPEs. It is an excellent choice for applications requiring flexibility in the following markets: automotive parts, appliance, business machines, construction, consumer products, and electronics.

General Information			
Features	Vulcanable		
	Good electrical performance		
	Good flexibility		
	Ozone resistance		
	Good chemical resistance		
	Good weather resistance		
	Heat resistance, high		
	Medium hardness		
Uses	Electrical/Electronic Applications		
	Electrical appliances		
	Washer		
	Composite		
	Architectural application field		
	Seals		
	Weather-resistant sealing strip		
	Application in Automobile Field		
	Soft touch application		
	Business equipment		
	Plastic modification		
	Consumer goods application field		
Forms	Particle		
Processing Method	Composite		
	Extrusion		
	Profile extrusion molding		

Density (23°C)	Physical	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A. 15 sec, lejection Molded)	Density (23°C)	0.958	g/cm³	ISO 1183
Injection Moldedh	Hardness	Nominal Value	Unit	Test Method
Tensile Stress   1,100% Strain, 23°C)   6.70   MPa   ISO 37		90		ISO 868
Tensile Stress	Elastomers	Nominal Value	Unit	Test Method
Tensile Elongation	Tensile Stress <sup>1</sup> (100% Strain, 23°C)	6.70	MPa	ISO 37
Tear Strength 4 (23°C)	Tensile Stress <sup>2</sup> (Break, 23°C)	15.0	MPa	ISO 37
Compression Set         50         %         ISO 815           70°C, 22 hr         50         %         ISO 815           125°C, 70 hr         72         %         ISO 815           Themal         Nominal Value         Unit         Test Method           Brittleness Temperature         -60.0         °C         ISO 812           Melting Temperature         155         °C         Internal method           Additional Information         Nominal Value         Test Method           Ozone Resistance - 500 hr, 100 pphm 03 conc.         Excellent         ASTM D1149           Extruder Screw L/D Ratio         >240:1.0         ***           Extruder Screw L/D Ratio         >240:1.0         ***           Extruder Screw Compression Ratio         30:1.0         ***           Injection         Nominal Value         Unit         ***           Poying Temperature         800 - 90.0         **C         ***           Rear Temperature         800 - 20         ***         ***           Mold Imperature         200 - 220         ***         ***           Front Temperature         200 - 220         ***         ***           Mold Temperature         30.0 - 55.0         ***         ***	Tensile Elongation <sup>3</sup> (Break, 23°C)	600	%	ISO 37
7°C°C, 22 hr         50         %         ISO 815           125°C, 70 hr         72         %         ISO 815           Thermal         Nominal Value         Unit         Test Method           Brittleness Temperature         -60.0         °C         ISO 812           Melting Temperature         155         °C         Internal method           Additional Information         Nominal Value         "C         Internal method           Ozone Resistance - 500 hr, 100 pphm 03 conc.         Excellent         ASTM D1149           Extruder Screw L/D Ratio         > 240-1.0         ASTM D1149           Extruder Screw Compression Ratio         3.01.0         "C           Injection         Nominal Value         Unit         Unit           Injection         Nominal Value         Unit         Unit         Unit           Rear Temperature         800 - 90.0         "C         Unit	Tear Strength <sup>4</sup> (23°C)	47	kN/m	ISO 34-1
125°C, 70 hr	Compression Set			ISO 815
Thermal         Nominal Value         Unit         Test Method           Brittleness Temperature         -60.0         "C         ISO 812           Melting Temperature         155         "C         Internal method           Additional Information         Nominal Value         Test Method           Ozone Resistance - 500 hr, 100 pphm O3 conc.         Excellent         ASTM D1149           Extruder Screw L/D Ratio         > 240-1.0	70°C, 22 hr	50	%	ISO 815
Brittleness Temperature         6-0.0         "C         ISS 812           Melting Temperature         155         "C         Internal method           Additional Information         Nominal Value         Test Method           Ozone Resistance - 500 hr, 100 pphm 03 conc.         Excellent         ASTM D1149           Extruder Screw L/D Ratio         > 24.0-1.0         Test Method           Extruder Screw Compression Ratio         3.0-1.0         Test Method           Injection         Nominal Value         Unit           Drying Temperature         80.0 - 90.0         "C           Programmenture         80.0 - 90.0         "C           Middle Temperature         200 - 22.0         "C           Front Temperature         200 - 22.0         "C           Nozzle Temperature         200 - 22.0         "C           Nozle Temperature         30.0 - 55.0         "C           Mold Temperature         480 - 6.90         MPa           Holding Pressure         480 - 6.90         MPa           Holding Pressure         100 - 200         "Programmenture           Vent Depth         0.0 - 200         "T           Vent Depth         0.0 - 200         "T           Vent Depth         0.0 - 200	125°C, 70 hr	72	%	ISO 815
Melting Temperature         155         "C         Internal method           Additional Information         Nominal Value         Test Method           Ozone Resistance - 500 hr, 100 pphm O3 conc.         Excellent         ASTM D1149           Extruder Screw L/D Ratio         >24.0:1.0         ************************************	Thermal	Nominal Value	Unit	Test Method
Additional Information         Nominal Value         Test Method           Ozone Resistance - 500 hr, 100 pphm O3 conc.         Excellent         ASTM D1149           Extruder Screw L/D Ratio         >24.0:1.0         Test Method           Extruder Screw Compression Ratio         3.0:1.0         Test Method           Injection         Nominal Value         Unit           Drying Temperature         80.0 - 90.0         *C           Drying Time         3.0 - 4.0         hr           Rear Temperature         180 - 190         *C           Middle Temperature         200 - 220         *C           Front Temperature         200 - 220         *C           Nozzle Temperature         200 - 220         *C           Mold Temperature         30.0 - 55.0         *C           Mold Temperature         30.0 - 55.0         *C           Mold Temperature         2.10 - 4.10         MPa           Holding Pressure         2.10 - 4.10         MPa           Screw Speed         100 - 200         mm           Screw Speed         100 - 200         mm           Vent Depth         0.025         mm           Injection instructions         Test Method         MPa           Vent Depth <t< td=""><td>Brittleness Temperature</td><td>-60.0</td><td>°C</td><td>ISO 812</td></t<>	Brittleness Temperature	-60.0	°C	ISO 812
Ozone Resistance - 500 hr, 100 pphm O3 conc.         Excellent         ASTM D1149           Extruder Screw L/D Ratio         > 24.01.0	Melting Temperature	155	°C	Internal method
conc.         Excellent         ASTM D1149           Extruder Screw L/D Ratio         >24.01.0           Extruder Screw Compression Ratio         3.01.0           Injection         Nominal Value         Unit           Drying Temperature         80.0 - 90.0         *C           Drying Time         3.0 - 4.0         hr           Rear Temperature         180 - 190         *C           Middle Temperature         200 - 220         *C           Front Temperature         200 - 220         *C           Nozzle Temperature         200 - 220         *C           Mold Temperature         30.0 - 55.0         *C           Injection Pressure         4.80 - 6.90         MPa           Holding Pressure         2.10 - 4.10         MPa           Screw Speed         100 - 200         rpm           Vent Depth         0.025         mm           Injection instructions         Holding Time: 4-10 seconds           Cooling Time: 15-30 seconds         Kontinue Holding Time: 15-30 seconds           Fixtusion         Nominal Value         Unit	Additional Information	Nominal Value		Test Method
Extruder Screw Compression Ratio         3.0:1.0           Injection         Nominal Value         Unit           Drying Temperature         80.0 - 90.0         °C           Drying Time         3.0 - 4.0         hr           Rear Temperature         180 - 190         °C           Middle Temperature         200 - 220         °C           Front Temperature         200 - 220         °C           Nozzle Temperature         200 - 220         °C           Mold Temperature         30.0 - 55.0         °C           Mold Temperature         30.0 - 55.0         °C           Injection Pressure         4.80 - 6.90         MPa           Holding Pressure         2.10 - 4.10         MPa           Back Pressure         0.0689 - 1.03         MPa           Screw Speed         100 - 200         rpm           Vent Depth         0.025         mm           Injection instructions         Holding Time: 4-10 seconds           Cooling Time: 15-30 seconds         Nominal Value         Unit           Drying Temperature         80.0 - 90.0         °C		Excellent		ASTM D1149
Injection         Nominal Value         Unit           Drying Temperature         80.0 - 90.0         °C           Drying Time         3.0 - 4.0         hr           Rear Temperature         180 - 190         °C           Middle Temperature         200 - 220         °C           Front Temperature         200 - 220         °C           Nozzle Temperature         200 - 220         °C           Processing (Melt) Temp         200 - 220         °C           Mold Temperature         30.0 - 55.0         °C           Injection Pressure         4.80 - 6.90         MPa           Holding Pressure         2.10 - 4.10         MPa           Back Pressure         0.0689 - 1.03         MPa           Screw Speed         100 - 200         rpm           Vent Depth         0.025         mm           Injection Instructions         Holding Time: 4-10 seconds           Cooling Time: 15-30 seconds         Cooling Time: 15-30 seconds           Extrusion         Nominal Value         Unit           Drying Temperature         80.0 - 90.0         °C	Extruder Screw L/D Ratio	>24.0:1.0		
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Injection Pressure 4.80 - 6.90 MPa Holding Pressure 2.10 - 4.10 MPa Back Pressure 0.0689 - 1.03 MPa Screw Speed 100 - 200 rpm Vent Depth 0.025 mm  Injection instructions Holding Time: 4-10 seconds Cooling Time: 15-30 seconds Extrusion Nominal Value Unit  Drying Temperature 80.0 - 90.0 °C	Processing (Melt) Temp	200 - 220	°C	
Holding Pressure 2.10 - 4.10 MPa  Back Pressure 0.0689 - 1.03 MPa  Screw Speed 100 - 200 rpm  Vent Depth 0.025 mm  Injection instructions  Holding Time: 4-10 seconds Cooling Time: 15-30 seconds  Extrusion Nominal Value Unit  Drying Temperature 80.0 - 90.0 °C	Mold Temperature	30.0 - 55.0	°C	
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Screw Speed100 - 200rpmVent Depth0.025mmHolding Time: 4-10 seconds Cooling Time: 15-30 secondsExtrusionNominal ValueUnitDrying Temperature80.0 - 90.0°C		4.60 - 6.90	IVIF a	
Vent Depth     0.025     mm       Injection instructions       Holding Time: 4-10 seconds Cooling Time: 15-30 seconds       Extrusion     Nominal Value     Unit       Drying Temperature     80.0 - 90.0     °C	Holding Pressure			
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Holding Time: 4-10 seconds Cooling Time: 15-30 seconds  Extrusion Nominal Value Unit  Drying Temperature 80.0 - 90.0 °C	Back Pressure	2.10 - 4.10 0.0689 - 1.03	MPa MPa	
Cooling Time: 15-30 seconds  Extrusion Nominal Value Unit  Drying Temperature 80.0 - 90.0 °C	Back Pressure Screw Speed	2.10 - 4.10 0.0689 - 1.03 100 - 200	MPa MPa rpm	
Drying Temperature 80.0 - 90.0 °C	Back Pressure Screw Speed Vent Depth	2.10 - 4.10 0.0689 - 1.03 100 - 200	MPa MPa rpm	
	Back Pressure  Screw Speed  Vent Depth  Injection instructions  Holding Time: 4-10 seconds	2.10 - 4.10 0.0689 - 1.03 100 - 200	MPa MPa rpm	
Drying Time 3.0 - 4.0 hr	Back Pressure  Screw Speed  Vent Depth  Injection instructions  Holding Time: 4-10 seconds Cooling Time: 15-30 seconds	2.10 - 4.10 0.0689 - 1.03 100 - 200 0.025	MPa MPa rpm mm	
	Back Pressure  Screw Speed  Vent Depth  Injection instructions  Holding Time: 4-10 seconds Cooling Time: 15-30 seconds  Extrusion	2.10 - 4.10 0.0689 - 1.03 100 - 200 0.025 Nominal Value	MPa MPa rpm mm	

Cylinder Zone 1 Temp.	180	°C	
Cylinder Zone 2 Temp.	190	°C	
Cylinder Zone 3 Temp.	200	°C	
Cylinder Zone 4 Temp.	210	°C	
Cylinder Zone 5 Temp.	210	°C	
Melt Temperature	180 - 220	°C	
Die Temperature	210 - 220	°C	
Take-Off Roll	20.0 - 50.0	°C	
Extrusion instructions			
Screen Pack: 20 to 60 mesh			
NOTE			
1.	500 mm/min		
2.	500 mm/min		
3.	500 mm/min		
4.	500 mm/min		

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