



™

## Thermoplastic Elastomers

Healthcare

Electrical & Electronics

Appliance

Industrial

Wire & Cable

Building & Construction

Transportation

Packaging

Consumer



Global Product Selector Guide

*PolyOne*™

# Healthcare Tubing

## Versaflex™ HC MT Series

Apprehensions about the environmental impact of plastics are causing medical device manufacturers to take a hard look at traditional polymer materials that incorporate halogens, phthalate-based plasticizers, or high levels of extractables. These five FDA-compliant materials provide customers with new choices for designing cleaner and more eco-conscious medical tubing.



# 30 Years of Thermoplastic Elastomer Experience

In an era of rapid technology change and global competition, companies are turning to new design solutions and innovative ideas to help them maintain their competitive edge. For over 30 years, thermoplastic elastomer (TPE) solutions from GLS have given thousands of consumer, healthcare and industrial products the touch of success.

**GLS offers the most complete range of TPE compounds and alloys in the industry.**

To meet your unique product specifications GLS can utilize a variety of TPE technologies:

- Biopolymers
- Copolyesters
- Olefin block copolymers
- Styrenic block copolymers
- Thermoplastic polyurethanes
- Thermoplastic vulcanizates



## GLS Thermoplastic Elastomers joins PolyOne Corporation

The combination of GLS's specialty TPE technology, compounding expertise and brand, along with PolyOne's extensive global infrastructure and commercial presence offers customers enhanced technologies; a broader range of products, services and solutions; and expanded access to specialized, high-growth markets around the globe.

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# GLS TPEs are Engineered to Your Exact Specifications

If your design demands alternatives to standard TPE products, GLS can custom-formulate a TPE solution that will add the greatest value to your application. GLS can formulate for a wide variety of attributes including; performance, function, aesthetics, and processability.

## Performance

- USP VI & ISO 10993 compliant
- FDA compliant
- EU food contact compliant
- UL listed
- NSF listed
- Halogen-free flame retardant
- Chemical resistance
- Gas barrier
- Electrically conductive
- Ultra-high density

## Functional

- High strength & elasticity
- Overmold adhesion
- Oil & chemical resistance
- Vibration and noise damping
- Sealing & gasketing
- Heat resistance
- Compression set resistance
- Antimicrobial
- Scratch resistance
- Low extractables

## Aesthetics

- Custom quality surface appearance
- Comfortable soft touch grip
- Custom colors & color effects
- Ultra-clear grades
- Custom scented TPEs
- Ultra-soft grades
- Wide range of unique feels
- High-grip
- Low friction
- Matte or glossy finish

## Processability

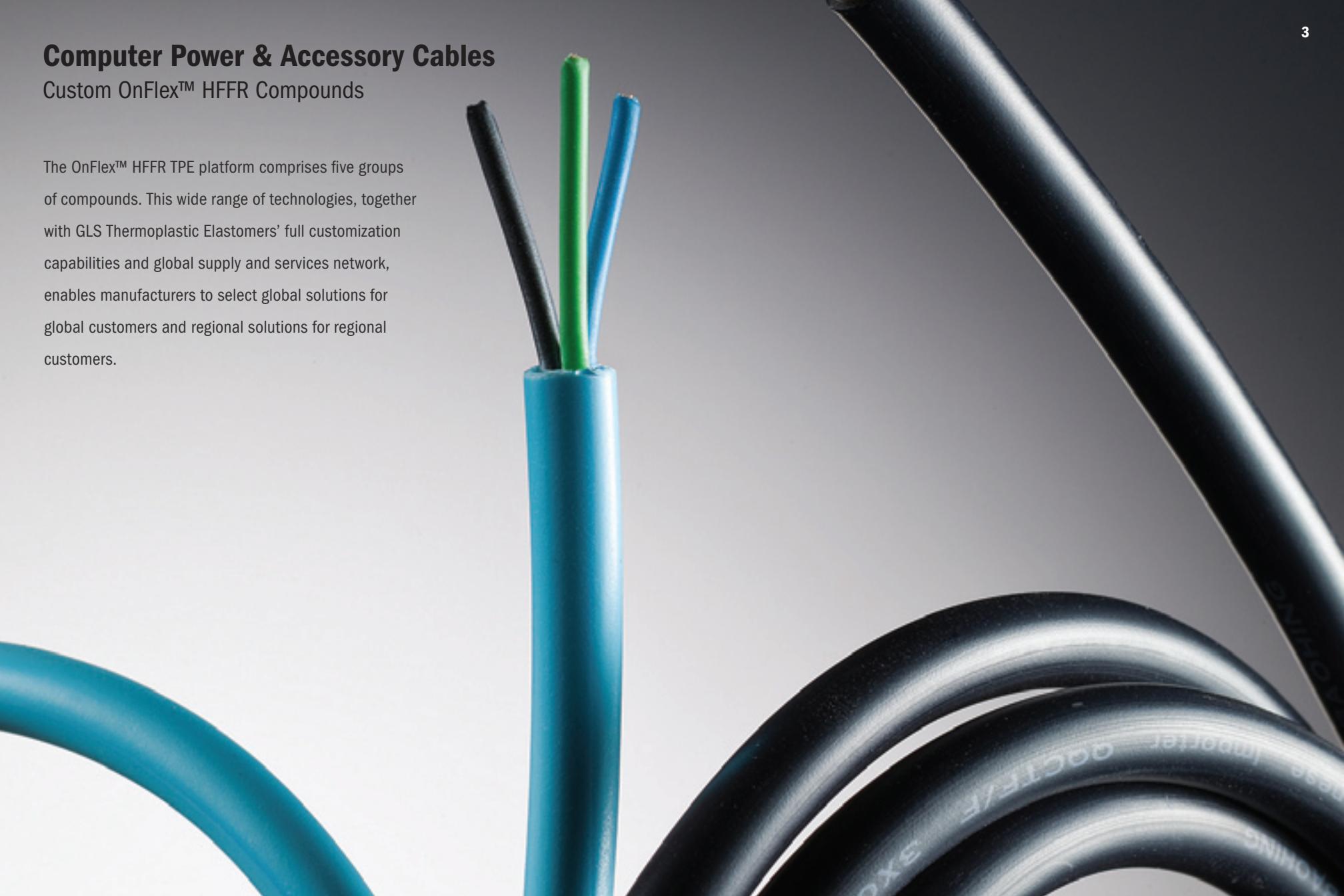
- Injection moldable
- Extrudable
- Blow moldable
- Pourable gels
- Rotomoldable
- Co-moldable
- Co-extrudable
- Calendarable
- Improved cycle times
- Improved run rates



## Computer Power & Accessory Cables

### Custom OnFlex™ HFFR Compounds

The OnFlex™ HFFR TPE platform comprises five groups of compounds. This wide range of technologies, together with GLS Thermoplastic Elastomers' full customization capabilities and global supply and services network, enables manufacturers to select global solutions for global customers and regional solutions for regional customers.



# Innovative TPE Solutions for Thousands of Applications



GLS TPEs are used in a wide range of markets and applications. Designers can apply the benefits of TPEs to new products by drawing on our extensive standard and custom grades - the broadest range of soft TPE materials available in the industry.

We can help you combine function with comfort, slip resistance, compliance or any of dozens of attributes common to TPEs. Need to marry structure with comfort? We offer options for overmolded soft touch TPEs that bond to a variety of engineered thermoplastics. Need chemical resistance combined with extremes in flexibility? GLS can supply grades that stand up to the roughest environments.

## Common TPE Applications

### Consumer

- Personal care items
- Sporting goods
- Infant care & toys
- Housewares
- Lawn & garden
- Furniture

### Healthcare

- Medical devices
- Medical tubing
- Catheters
- Drug storage & delivery
- Respiratory systems

### Packaging

- Films
- Food storage containers
- Caps & closures
- Tubing
- Liquid storage & seals
- Dispensing valves

### Wire & Cable

- AC/DC power cables
- Connectors
- Halogen-free cables
- Automotive cables

### Appliance

- Household
- Kitchen appliances
- Outdoors

### Building & Construction

- Hand & power tools
- Window & door seals
- Pipe fittings

### Electrical & Electronics

- Personal media players
- Protective cases
- Computer accessories
- Telecommunications

### Transportation

- Automotive interior
- Automotive exterior
- Window & door seals
- Under hood parts
- HVAC seals

### Industrial

- Belts and conveyors
- Safety equipment
- Industrial hose
- Industrial tubing

# Specialized Solutions in Every Market



Onflex™ products meet the requirements and end-use environments in the **building and construction, transportation, wire and cable** and **industrial** markets. This family of thermoplastic elastomers utilizes the available thermoplastic elastomer technologies to create compounds and alloys with highly specialized characteristics. Featured characteristics of Onflex™ TPEs include:

- High heat and chemical resistance
- Glass filled products
- Automotive approved grades
- UV Resistant
- Good compression set
- Adhesion to a range of engineering plastics
- Flame retardant grades
- Extrusion, injection, and blow moldable



Versaflex™ products meet the requirements and end-use environments in the **healthcare, consumer, electrical and electronics, packaging** and **appliance** markets. This family of thermoplastic elastomers utilizes the available thermoplastic elastomer technologies to create compounds and alloys with highly specialized characteristics. Featured characteristics of Versaflex™ TPEs include:

- Adhesion to a range of engineering plastics
- NSF, and UL 94 listed grades
- Clear, heat resistant TPEs
- Extrusion, injection, and blow moldable
- Excellent colorability
- Sterilizable under autoclave, radiation and EtO gas
- Ultra-clear grades
- Ultra-soft TPEs down to 30 Shore 00
- FDA, USP VI, ISO 10993 approved grades

# Technology Focused Products

## Variety of TPE Technologies

Through the formation of key strategic relationships GLS has the capability to draw from a wide variety of technologies to develop products. The GLS product line features four standard product families with a variety of performance features to provide you with the optimum TPE solution for your application. GLS's technology focused products extend across a variety of TPE technologies:

- Styrenic block copolymers
- Olefin block copolymers
- Thermoplastic vulcanizates
- Thermoplastic polyurethanes

In addition to proprietary compounds and alloys, GLS is the exclusive distributor for Kraton® Polymers and compounds in North America.

**DYN***aflex*<sup>™</sup>  
TPE Compounds

Dynaflex™ TPE Compounds are materials developed to fulfill a broad spectrum of customer specifications. They provide an economical solution for a wide variety of applications while providing the following advantages:

- Soft, flexible feel
- Excellent grip characteristics
- Good weatherability
- Easy to process and color
- FDA compliant and medical grades available
- Translucent and clear grades available

**DYN***alloy*<sup>™</sup>  
OBC Compounds

Dynalloy™ OBC Compounds are based on INFUSE™ polymers (OBC) technology licensed from The Dow Chemical Company. Dynalloy grades offer customers a broad array of standard and customized TPE materials for a wide range of applications. The key features of Dynalloy OBC Compounds are:

- Excellent colorability
- Superior flow characteristics
- Excellent processability with fast set-up rates



Powered by INFUSE™ Polymers



Versalloy™ Elastomer Alloys deliver high performance in demanding applications. Based on TPV technology, these alloys demonstrate the performance properties of a TPV with improved processability and surface quality compared to standard TPVs. A few of the benefits of Versalloy elastomer alloys:

- Excellent surface quality
- Easy processing with excellent flow for long, thin flow paths
- Good compression set
- High tear strength
- Highly colorable
- Low specific gravity



Versollan™ elastomer alloys, which contain BASF Corporation High Performance Polyurethane (TPU), are a new class of soft TPU elastomers. These products have the enhanced performance characteristics of TPUs with the rubbery grip and matte finish of TPEs. The key features of Versollan alloys are:

- Soft, rubbery feel with matte finish
- Chemical and oil resistance
- Excellent adhesion to PC, ABS, PC/ABS
- Easy to process with fast set-up rates
- Flow characteristics similar to styrenic TPEs



### Exclusive North American Distributor

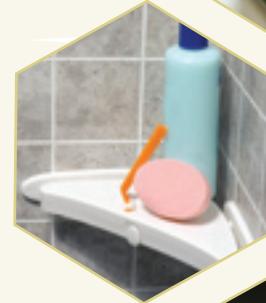
Manufactured by Kraton Polymers LLC, Kraton® compounds are high performance, versatile materials combining high strength and low viscosity. Several grades are available for use in a variety of applications. *Kraton® Compounds are only distributed by GLS in North America.*



## No Surprises Pledge<sup>SM</sup>

At PolyOne, we are committed to helping you grow your business with safe and environmentally sound solutions. This commitment is exemplified by our **No Surprises Pledge<sup>SM</sup>**, which we make to all customers and markets across the globe.

- You can be confident that, in formulating and manufacturing our materials, we use sustainable practices to provide long-term product viability and sound environmental stewardship.
- You can expect that the materials we produce contain only ingredients that conform to accepted legal and regulatory compliance guidelines.
- You can trust that PolyOne materials meet the rigorous quality and safety management standards required across the globe.
- You can be certain that PolyOne meets or exceeds the material safety data reporting requirements of your country or region.
- When you choose PolyOne, you can be confident our products will help you meet or exceed today's stringent compliance standards.



# Product Selector Guide

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## Testing Methods

### Hardness Points

ASTM: D2240, 10 Second Delay  
ISO: 868, 10 Second Delay

### Specific Gravity

ASTM: D792  
ISO: 2781

### Compression Set @ 23°C

ASTM: 395B, @22hrs  
ISO: 815, @72hrs

### Compression Set @ 100°C

ASTM: 395B, @22hrs  
ISO: 815, @22hrs

### 100% Modulus

ASTM: D 412-Die C  
ISO: 37

### 300% Modulus

ASTM: D 412-Die C  
ISO: 37

### Tensile Strength

ASTM: D 412-Die C  
ISO: 37

### Elongation

ASTM: D 412-Die C  
ISO: 37

### Tear Strength

ASTM: D 624  
ISO: 34-1

## Standard Grades

GENERAL PROPERTIES						TENSILE PROPERTIES								REGULATORY					BONDING					PROCESS			OTHER									
Color	Hardness	Specific Gravity	Compression Set @ 23 °C		Compression Set @ 100 °C	100% Modulus		300% Modulus		Tensile Strength		Elongation	Tear Strength		FDA	2002/T2/EC	ISO 10993	USP VI	NSF	RoHS	UL 94	ABS / PC	Acrylics	Copolyester	Nylon	PE	PP	PS	Injection	Extrusion	Blow	Special Characteristics				
	ASTM/ISO Shore A	ASTM/ISO	ASTM %	ISO %	ASTM/ISO %	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM/ISO %	ASTM pli	ISO kN/M																						
<b>Kraton® Polymers D and G Series</b>																																				
<b>D2104Z</b>	Trans.	35A	0.92	—	—	—	75	0.52	150	1.03	1400	9.6	1300	—	—	x																			High Strength	
<b>D2109Z</b>	Trans./White	46A	0.93	—	—	—	200	1.38	300	2.07	500	3.5	550	125	22	x										x									Good Heat Seal	
<b>G2705Z</b>	Trans.	57A	0.89	19	—	—	280	1.93	420	2.9	840	5.8	650	155	27	x		x								x									Low Compression Set	
<b>G7705</b>	Natural/Black	44A	1.20	15	—	—	200	1.38	300	2.07	600	4.1	700	100	18											x									Ozone Resistant	
<b>G7720</b>	Natural/Black	57A	1.20	15	—	—	200	1.38	300	2.07	800	5.5	700	150	26											x									Ozone Resistant	
<b>G7820</b>	Natural/Black	90A	1.14	27	—	—	700	4.83	100	6.89	1900	13.1	600	300	53											x									Good Thermal Stability	
<b>Dynaflex™ D Series</b>																																				
<b>D3226</b>	Natural	40A	0.99	15	—	—	430	2.96	—	—	580	16.0	270	90	16																				Economy Grades	
<b>D3202</b>	Natural	59A	0.99	16	—	—	670	4.62	—	—	700	4.8	230	140	25																					Economy Grades
<b>D3204</b>	Natural	82A	1.01	22	—	—	990	6.83	1200	8.27	1240	8.6	400	260	46																					Economy Grades
<b>Dynalloy™ OBC 8000 Series</b>																																				
<b>OBC 8000-N30</b>	Natural	30A	1.06	22	—	—	100	0.68	155	1.07	515	3.6	1040	—	—	x	x																			Non-tacky
<b>OBC 8000-B30</b>	Black	30A	1.06	22	—	—	100	0.68	155	1.07	515	3.6	1040	—	—	x	x																			Non-tacky
<b>OBC 8000-T05</b>	Trans.	5A	0.87	—	—	—	15	0.10	30	0.20	160	1.1	1800	—	—	x	x									x	x									Ultra Soft
<b>OBC 8000-T40</b>	Trans.	40A	0.88	—	—	—	160	1.1	245	1.69	495	3.4	840	—	—	x	x									x	x									Non-tacky
<b>OBC 8000-T60</b>	Trans.	60A	0.88	30	—	—	265	1.82	360	2.48	610	4.2	760	—	—	x	x									x	x									Non-tacky

• Properties shown are typical values and are not intended as product specifications. All properties were measured using natural product unless otherwise specified.

For some products, the black properties will differ slightly from the natural version – refer to product Technical Data Sheet for specific product properties.

• The test methods referenced are modifications of the ASTM/ISO procedures listed on page 9. All tests are conducted on injection molded samples.



## Healthcare &amp; Packaging Grades

GENERAL PROPERTIES						TENSILE PROPERTIES								REGULATORY						BONDING					Sterilization		OTHER							
Color	Hardness	Specific Gravity	Compression Set @ 23 °C		Compression Set @ 100 °C	100% Modulus		300% Modulus		Tensile Strength		Elongation	Tear Strength		FDA	2002/72/EC	ISO 10993	USP VI	NSF	RoHS	UL 94	ABS / PC	Acrylics	Copolyester	Nylon	PE	PP	PS	Autoclave	Radiation	ETO	Special Characteristics		
	ASTM/ISO Shore A	ASTM/ISO	ASTM %	ISO %	ASTM/ISO %	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM/ISO %	ASTM pli	ISO kN/M																				
<b>Versaflex™ HC Medical Tubing</b>																																		
HC MT222	Clear	65A	0.88	–	–	–	280	1.93	475	3.28	1150	8.3	450	–	–	x	x	x	x	x														Without Plasticizers
HC MT224	Clear	75A	0.89	–	–	–	468	3.23	773	5.33	1364	9.4	527	–	–	x	x	x	x	x														Without Plasticizers
HC MT226	Clear	84A	0.89	–	–	–	606	4.17	885	6.1	1600	11.0	600	–	–	x	x	x	x	x														Without Plasticizers
HC MT307	Trans.	68A	0.89	–	–	–	450	3.1	–	–	870	6.0	465	–	–	x	x	x	x	x														Very High Service Temperature
HC MT555	Trans.	54A	0.89	–	–	–	265	1.83	480	3.31	850	5.9	630	–	–	x	x	x	x	x														High Service Temperature
<b>Versaflex™ HC Gaskets &amp; Stoppers</b>																																		
HC 2110-54B	Black	54A	1.02	15	–	–	–	–	–	–	645	4.5	190	–	–	x	x	x	x	x														Low COF, No Stiction
HC 2110-57B	Black	57A	1.09	–	–	–	–	–	558	3.85	537	3.7	350	–	–	x	x	x	x	x														Low Stiction
HC 2110-43N	Natural	43A	0.98	12	–	–	135	0.93	–	–	725	5.0	710	–	–	x	x	x	x	x													Reseal, Good Compression Set	
HC 2110-51N	Natural	52 A	0.91	22	–	–	202	1.39	–	–	279	1.9	240	–	–	x	x	x	x	x														High Barrier to O <sub>2</sub> & Moisture
<b>Versaflex™ CL E Series</b>																																		
CL E85	Clear	85A	0.90	–	–	–	606	4.17	885	6.1	1600	11.0	600	–	–	x	x	x	x	x														Without plasticizers
CL E90	Clear	90A	0.90	–	–	–	1000	6.89	1234	8.8	1834	12.6	570	–	–	x	x	x	x	x														Without plasticizers
CL E95	Clear	95A	0.90	–	–	–	1680	11.6	1730	11.9	2485	17.1	575	–	–	x	x	x	x	x														Without plasticizers

• Properties shown are typical values and are not intended as product specifications. All properties were measured using natural product unless otherwise specified.

For some products, the black properties will differ slightly from the natural version – refer to product Technical Data Sheet for specific product properties.

• The test methods referenced are modifications of the ASTM/ISO procedures listed on page 9. All tests are conducted on injection molded samples.



## Elevated Temperature, Chemical Resistance

GENERAL PROPERTIES						TENSILE PROPERTIES								REGULATORY					BONDING					PROCESS		OTHER								
Color	Hardness	Specific Gravity	Compression Set @ 23°C		Compression Set @ 100°C	100% Modulus		300% Modulus		Tensile Strength		Elongation	Tear Strength		FDA	2002/72/EC	ISO 10993	USP VI	NSF	RoHS	UL 94	ABS / PC	Acrylics	Copolyester	Nylon	PE	PP	PS	Injection	Extrusion	Blow	Special Characteristics		
	ASTM/ISO Shore A	ASTM/ISO	ASTM %	ISO %	ASTM/ISO %	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM/ISO %	ASTM pli	ISO kN/M																				
<b>OnFlex™ V 1000 Series</b>																																		
V 1045A-S0011	Natural/Black	45A	0.93	—	23	35	203	1.4	—	—	348	2.4	240	96	17																			Heat & Chemical Resistance
V 1050A-S0001	Natural/Black	50A	0.94	—	21	36	232	1.6	—	—	377	2.6	260	82	14																			Heat & Chemical Resistance
V 1060A-S0003	Natural/Black	60A	0.94	—	22	36	290	2	493	3.4	508	3.5	320	100	18																			Heat & Chemical Resistance
V 1070A-S0005	Natural/Black	70A	0.93	—	30	42	435	3	754	5.2	899	6.2	370	180	32																			Heat & Chemical Resistance
V 1080A-S0007	Natural/Black	80A	0.94	—	41	54	580	4	914	6.3	1230	8.5	530	240	42																			Heat & Chemical Resistance
V 1090A-S0009	Natural/Black	90A	0.94	—	35	64	725	5	957	6.6	1580	10.9	480	290	50																			Heat & Chemical Resistance
V 1040D-S0010	Natural/Black	40D	0.93	—	46	75	1160	8	1380	9.5	2410	16.6	530	390	68																			Heat & Chemical Resistance
<b>OnFlex™ V 2000 Series</b>																																		
V 2070A-E0266	Natural	70A	0.94	—	40	44	392	2.7	638	4.4	1650	11.4	680	170	30																			Heat & Chemical Resistance
V 2080A-E0267	Natural	80A	0.96	—	40	48	479	3.3	870	6	1960	13.5	650	230	41																			Heat & Chemical Resistance
V 2090A-E0268	Natural	90A	0.96	—	37	56	725	5	1100	7.6	2230	15.4	550	320	57																			Heat & Chemical Resistance
<b>OnFlex™ V 3000 Series</b>																																		
V 3085A-S0098	Natural/Black	85A	0.93	—	38	60	899	6.2	1150	7.9	2030	14.0	500	—	—																			Heat & Chemical Resistance
V 3040D-S0093	Natural/Black	40D	0.92	—	38	61	1100	7.6	1350	9.3	2280	15.7	570	—	—																			Heat & Chemical Resistance
V 3050D-S0097	Natural/Black	50D	0.92	—	45	75	1230	8.5	1450	10	2350	16.2	600	—	—																			Heat & Chemical Resistance

• Properties shown are typical values and are not intended as product specifications. All properties were measured using natural product unless otherwise specified.

For some products, the black properties will differ slightly from the natural version – refer to product Technical Data Sheet for specific product properties.

• The test methods referenced are modifications of the ASTM/ISO procedures listed on page 9. All tests are conducted on injection molded samples.

## High Heat and/or Fire Retardant

GENERAL PROPERTIES							TENSILE PROPERTIES							REGULATORY					BONDING					PROCESS			OTHER							
Color	Hardness	Specific Gravity	Compression Set @ 23°C		Compression Set @ 100°C	100% Modulus		300% Modulus		Tensile Strength		Elongation	Tear Strength		FDA	2002/72/EC	ISO 10993	USP VI	NSF	RoHS	UL 94	ABS / PC	Acrylics	Copolyester	Nylon	PE	PP	PS	Injection	Extrusion	Blow	Special Characteristics		
	ASTM/ISO Shore A	ASTM/ISO	ASTM %	ISO %	ASTM/ISO %	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM/ISO %	ASTM pli	ISO kN/M																				
<b>OnFlex™ V 2400 Series</b>																																		
V 2470A-E0248	Natural/Black	70A	0.94	—	40	44	392	2.7	638	4.4	1650	11.4	680	170	30																			Heat Stabilized
V 2480A-E0247	Natural/Black	80A	0.96	—	40	48	479	3.3	870	6	1960	13.5	650	230	41																			Heat Stabilized
V 2490A-E0243	Natural/Black	90A	0.96	—	37	56	725	5	1100	7.6	2230	15.4	550	320	57																			Heat Stabilized
<b>OnFlex™ S HT Series</b>																																		
S HT 40A-3E2131	Natural/Black	40A	1.00	—	12	45	145	1.0	290	2.0	891	6.15	705	—	—																			EN681-2 Compliant
S HT 50A-3E2099	Natural/Black	50A	1.00	—	20	42	217	1.5	348	2.4	1057	7.3	680	—	—																			EN681-2 Compliant
S HT 60A-3E2101	Natural/Black	60A	1.00	—	24	42	275	1.9	435	3.0	1335	9.2	745	—	—																			EN681-2 Compliant
S HT 70A-3E2103	Natural/Black	70A	1.00	—	25	51	340	2.35	500	3.45	1225	8.45	715	—	—																			EN681-2 Compliant
<b>OnFlex V 1500 Series</b>																																		
V 1555A-E0285	Natural/Black	55A	0.94	—	23	30	247	1.7	408	2.8	537	3.7	400	—	—																			EN681-2 Compliant
<b>OnFlex™ S FR Series</b>																																		
S FR 25A-3S1830	Natural/Black	25A	1.20	—	12	49	102	0.7	276	1.9	348	2.4	400	77	14																			Flame Retardant (Halogenated)
S FR 40A-3S1841	Natural/Black	40A	1.20	—	14	47	160	1.1	450	3.1	653	4.5	430	100	18																			Flame Retardant (Halogenated)
S FR 50A-3S1831	Natural/Black	50A	1.20	—	10	44	218	1.5	522	3.6	870	6.0	510	130	23																			Flame Retardant (Halogenated)
S FR 60A-3S1846	Natural/Black	60A	1.20	—	17	47	261	1.8	580	4	972	6.7	510	150	27																			Flame Retardant (Halogenated)
S FR 70A-3S1890	Natural/Black	70A	1.20	—	19	53	392	2.7	754	5.2	1190	8.2	500	170	30																			Flame Retardant (Halogenated)
S FR 80A-3S1892	Natural/Black	80A	1.20	—	27	71	551	3.8	856	5.9	1230	8.5	480	190	34																			Flame Retardant (Halogenated)
<b>OnFlex™ V 2600 Series</b>																																		
V 2695A-E0246	Natural/Black	95A/35D	1.30	—	45	60	507	3.5	834	5.75	7.0	450	230	228	40																			Flame Retardant (Halogenated)

## Ultraviolet Resistance

GENERAL PROPERTIES							TENSILE PROPERTIES							REGULATORY					BONDING					PROCESS			OTHER							
Color	Hardness	Specific Gravity	Compression Set @ 23 °C		Compression Set @ 100 °C	100% Modulus		300% Modulus		Tensile Strength		Elongation	Tear Strength		FDA	2002 / T2 / EC	ISO 10993	USP VI	NSF	RoHS	UL 94	ABS / PC	Acrylics	Copolyester	Nylon	PE	PP	PS	Injection	Extrusion	Blow	Special Characteristics		
	ASTM/ISO Shore A	ASTM/ISO	ASTM %	ISO %	ASTM/ISO %	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM/ISO %	ASTM pli	ISO kN/M																				
<b>OnFlex™ V 1100 Series</b>																																		
V 1170A-S0200	Natural/Black	70A	0.93	—	30	43	479	3.3	798	5.5	986	6.8	360	190	33																			Good UV Resistance
V 1180A-S0202	Natural/Black	80A	0.94	—	38	50	580	4	885	6.1	1090	7.5	410	220	39																			Good UV Resistance
V 1190A-S0204	Natural/Black	90A	0.94	—	41	65	798	5.5	1000	6.9	1330	9.2	460	290	50																			Good UV Resistance
<b>OnFlex™ V 2100 Series</b>																																		
V 2170A-E0270	Natural/Black	70A	0.94	—	40	44	392	2.7	638	4.4	1650	11.4	680	170	30																			Good UV Resistance
V 2180A-E0271	Natural/Black	80A	0.96	—	40	48	479	3.3	870	6	1960	13.5	650	230	41																			Good UV Resistance
V 2190A-E0272	Natural/Black	90A	0.96	—	37	56	725	5	1100	7.6	2230	15.4	550	320	57																			Good UV Resistance
<b>OnFlex™ S EH Series</b>																																		
S EH 40A-3S7001	Natural/Black	40A	1.20	—	20	72	174	1.2	290	2	580	4.0	620	110	19																			Standard UV
S EH 50A-3S7002	Natural/Black	50A	1.20	—	21	74	218	1.5	319	2.2	580	4.0	680	110	19																			Standard UV
S EH 60A-3S7003	Natural/Black	60A	1.20	—	25	78	276	1.9	421	2.9	1040	7.2	650	160	28																			Standard UV
S EH 70A-3S7004	Natural/Black	70A	1.20	—	29	78	348	2.4	464	3.2	725	5.0	550	150	26																			Standard UV
S EH 80A-3S7005	Natural/Black	80A	1.20	—	39	88	508	3.5	653	4.5	1020	7.0	500	190	33																			Standard UV

• Properties shown are typical values and are not intended as product specifications. All properties were measured using natural product unless otherwise specified.

For some products, the black properties will differ slightly from the natural version – refer to product Technical Data Sheet for specific product properties.

• The test methods referenced are modifications of the ASTM/ISO procedures listed on page 9. All tests are conducted on injection molded samples.







## Specialty Grades

GENERAL PROPERTIES							TENSILE PROPERTIES							REGULATORY					BONDING					PROCESS			OTHER							
Color	Hardness	Specific Gravity	Compression Set @ 23°C		Compression Set @ 100°C	100% Modulus		300% Modulus		Tensile Strength		Elongation	Tear Strength		FDA	2002/72/EC	ISO 10993	USP VI	NSF	RoHS	UL 94	ABS / PC	Acrylics	Copolyester	Nylon	PE	PP	PS	Injection	Extrusion	Blow	Special Characteristics		
	ASTM/ISO Shore A	ASTM/ISO	ASTM %	ISO %	ASTM/ISO %	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM/ISO %	ASTM pli	ISO kN/M																				
<b>Dynaflex™ G 6700</b>																																		
<b>G6703</b>	Trans.	3A	0.90	8	—	—	20	0.14	40	0.27	390	2.7	1000	40	7	x	x																	Very Soft Feel
<b>G6713</b>	Trans.	13A	0.88	9	—	—	57	0.39	120	0.83	200	1.4	540	40	7	x	x										x		x	x			Very Soft Feel	
<b>G6730</b>	Trans.	30A	0.91	12	—	—	110	0.76	360	2.48	740	5.1	530	80	14	x	x										x		x	x			Very Soft Feel	
<b>Dynaflex™ G Opaque Series</b>																																		
<b>G7431</b>	Natural	66A	0.92	18	—	—	390	2.69	600	4.14	1300	9.7	610	200	35	x	x																	Metal Stabilized
<b>G7702</b>	Black	37A	1.10	11	—	—	140	0.96	400	2.76	600	4.1	480	120	21		x										x		x	x			Low Compression Set	
<b>G7736</b>	Natural	37A	1.06	11	—	—	150	1.03	280	1.93	430	3.0	600	80	14	x	x											x		x			Easy Flow Grip	
<b>Versaflex™ Clear/Transparent Series</b>																																		
<b>CL 2000X</b>	Clear	3A	0.87	23	—	—	15	0.10	29	0.2	250	1.7	1100	50	8.8	x																		High Clarity
<b>CL 2003X</b>	Clear	30 00	0.86	—	—	—	9	0.06	15	0.10	280	1.9	1300	40	7	x																		High Clarity, Ultra-soft
<b>CL 2242</b>	Clear	42A	0.89	23	—	—	152	1.05	280	1.93	731	5.0	720	120	22	x	x	x	x									x		x	x			Boilable
<b>CL 2250</b>	Clear	50A	0.89	20	—	—	230	1.59	430	2.96	720	5.0	610	130	24	x	x											x		x	x			Boilable
<b>CL 30</b>	Clear	30A	0.89	11	—	—	100	0.69	210	1.45	960	6.6	780	110	19	x	x											x		x			High Clarity	
<b>CL 40</b>	Clear	43A	0.89	12	—	—	200	1.38	350	2.41	860	5.9	690	130	23	x	x											x		x			High Clarity	
<b>Versollan™ RU Series</b>																																		
<b>RU 2204X</b>	Natural	55A	1.14	26	—	—	270	1.86	440	3.03	1800	12.4	690	240	42																			Abrasion Resistance
<b>RU 2205</b>	Natural	65A	1.16	34	—	—	380	2.62	610	4.21	2000	13.8	710	270	47																			Abrasion Resistance

• Properties shown are typical values and are not intended as product specifications. All properties were measured using natural product unless otherwise specified.

For some products, the black properties will differ slightly from the natural version – refer to product Technical Data Sheet for specific product properties.

• The test methods referenced are modifications of the ASTM/ISO procedures listed on page 9. All tests are conducted on injection molded samples.

GENERAL PROPERTIES						TENSILE PROPERTIES								REGULATORY					BONDING					PROCESS			OTHER								
Color	Hardness	Specific Gravity	Compression Set @ 23 °C		Compression Set @ 100 °C	100% Modulus		300% Modulus		Tensile Strength		Elongation	Tear Strength		FDA	2002/72/EC	ISO 10993	USP VI	NSF	RoHS	UL 94	ABS / PC	Acrylics	Copolyester	Nylon	PE	PP	PS	Injection	Extrusion	Blow	Special Characteristics			
	ASTM/ISO Shore A	ASTM/ISO	ASTM %	ISO %	ASTM/ISO %	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM psi	ISO MPa	ASTM/ISO %	ASTM pli	ISO kN/M																					
<b>OnFlex™ BIO Series</b>																																			
BIO 5170D-E0010	Natural/Black	70D	1.34	–	–	–	–	–	–	9427	65	15	–	–																		x		34% Renewable Content	
BIO 5180D-E0014	Natural/Black	80D	1.45	–	–	–	–	–	–	10877	75	15	–	–																		x		30% Renewable Content	
BIO 5370A-E0004	Natural/Black	70A	1.05	–	51	84	508	3.5	1240	8.5	1726	11.9	410	255	45							x	x								x	x	21% Renewable Content		
BIO 5380A-E0006	Natural/Black	80A	1.07	–	47	84	653	4.5	1465	10.1	2886	19.9	507	360	65							x	x								x	x	25% Renewable Content		
<b>OnFlex™ U 5300 Series</b>																																			
U 5355A-S0014	Natural/Black	55A	1.02	–	–	–	334	2.3	638	4.4	2130	14.7	630	–	–																	x	x	Excellent Scratch Resistance	
U 5370A-S0015	Natural	70A	1.05	–	–	–	580	4	1350	9.3	3630	25.0	520	–	–																	x	x	Excellent Scratch Resistance	
U 5380A-S0013	Natural/Black	80A	1.09	–	31	–	667	4.6	1510	10.4	4790	33.0	540	–	–																	x	x	Excellent Scratch Resistance	
<b>OnFlex™ U Automotive Series</b>																																			
U 5370A-E0077	Black	70A	1.08	–	–	–	348	2.4	725	5	2567	17.7	575	290	50																		x	x	Low Fogging, Matte, Low Abrasion
U 5470A-E0083	Natural	70A	1.08	–	–	–	682	4.7	1624	11.2	3147	21.7	485	330	57																		x	x	Low Fogging, Matte, Low Abrasion



## PolyOne Sustainable Solutions

GLS's OnFlex™ BIO Series thermoplastic polyurethane injection molding compounds are based on at least 20% renewable material as certified by ASTM-D6866 and are classified as a PolyOne Sustainable Solution. To learn more about PolyOne's Sustainable Solutions please visit [www.polyone.com/sustain](http://www.polyone.com/sustain).

# Global TPE Platform

## The GLS Mission

GLS will be known in our industry as a leader in the development and supply of soft thermoplastic elastomers.

- We make our products work for our customers by helping them take their ideas and turn them into commercial realities.
- We respond to customers' needs by developing custom materials to meet specific aesthetic and performance requirements.
- We are committed to continuously improving our services, our technology, and the quality and consistency of our products.

## Quality You Can Trust

GLS is committed to meeting customer requirements by maintaining and continuously improving the Quality and Environmental Management System. The Quality and Environmental Management System is deployed throughout the Organization and provides for continuous improvement of:

- service
- technology
- product consistency

GLS is committed to preventing pollution; minimizing the impact that our products and activities have on the environment; and complying with applicable environmental regulations. Employees are encouraged to reduce, reuse, and recycle.

## Global Infrastructure

Whether in Europe, Asia or the Americas, GLS can provide customers with the materials and application development support to make their project a success. We work wherever our customers need to be.

GLS has 7 manufacturing facilities, 5 technical centers and 40 available product warehouses to serve our customers around the globe.



## GLS THERMOPLASTIC ELASTOMERS

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Manufacturing



Sales/Service



Manufacturing and  
Sales/Service



PolyOne  
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