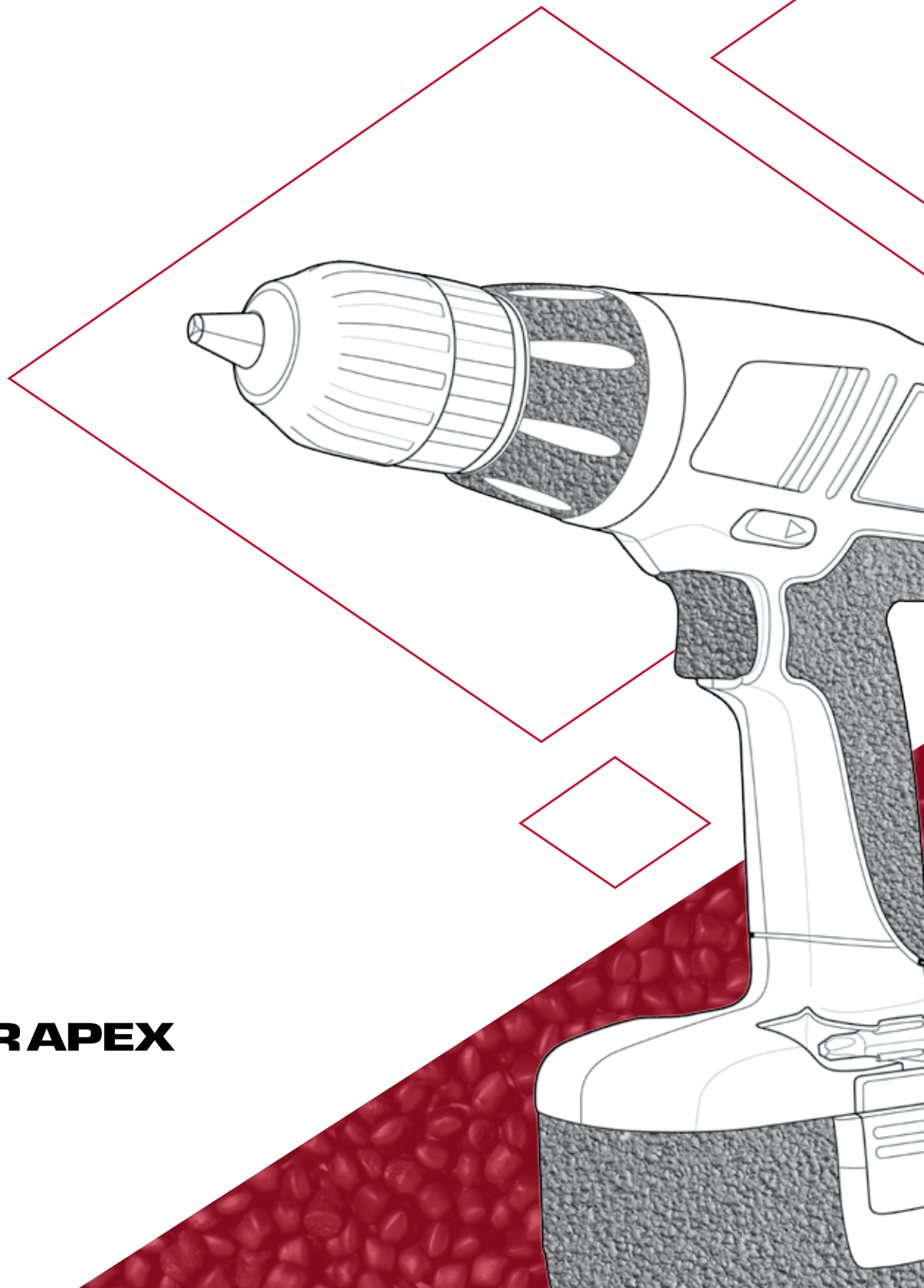


MONPRENE®
Thermoplastic Elastomers for
OVERMOLDING



Teknor Apex is your Partner in Overmolding.

The most critical challenge in overmolding is poor adhesion between the thermoplastic elastomer (TPE) and the substrate, which is typically an engineering thermoplastic (ETP). The bond is largely determined by the compatibility of the two materials, which is why material selection is so important. Take advantage of our experience in manufacturing both TPEs and ETPs, and adhesion-modifying these materials to work together for the most optimal bond strengths.

Monprene® OM Series: Adhesion-Modified TPEs for Overmolding

- Standard overmolding grades and customized formulations
- In-house experts in regulatory and product safety requirements
- World-class technical support in part design, tooling, and adhesion testing
- A mobile engineering team to assist in process optimization

Monprene® Series	OM-19300	OM-19400	OM-19100	OM-19100V
Technology	TPS	TPS	TPS	TPV (EPDM+PP)
Hardness Range* (Shore A or D)	30A to 70A	40A to 70A	40A to 70A	65A to 40D
Features & Attributes	Dry haptics, Excellent adhesion to GPPS, HIPS, and more	General purpose, Dry haptics	Low compression set, Dry haptics	Low compression set, Improved chemical resistance

DESIGNED FOR OVERMOLDING ONTO:

PC		✓		
ABS		✓		
PC/ABS		✓		
PA (Nylon)			✓	✓
PS and Copolymers (e.g., MBS)	✓			
CoPE (e.g., Tritan™)		✓		
PET, PBT		✓		
PMMA		✓		
ASA, SAN		✓		
POM		✓		

*Custom grades (outside of this hardness range) are available upon request.

Monprene® OM-19300 Series

Overmolding TPEs designed to adhere to PS and Copolymers (e.g., MBS)

Features & Attributes

- Dry haptics
- Excellent adhesion to GPPS, HIPS, and more

Regulatory

- REACH-SVHC and RoHS compliant
- FDA compliant grades for food contact are available upon request

Typical Properties	ASTM Test Method	Units	OM-19330	OM-19340	OM-19350	OM-19360	OM-19370
Color	—	—	Natural	Natural	Natural	Natural	Natural
Specific Gravity	D792	—	1.11	1.13	1.14	1.16	1.15
Hardness (5s delay)	D2240	Shore A	30	40	50	60	70
100% Modulus	D412	psi (MPa)	70 (0.48)	115 (0.79)	140 (0.97)	190 (1.31)	230 (1.59)
Tensile Strength	D412	psi (MPa)	640 (4.41)	1020 (7.03)	1100 (7.58)	1400 (9.65)	1400 (9.65)
Elongation	D412	%	700	675	710	670	650
Tear Strength (Die C, 20 in/min)	D624	lbf/in (kN/m)	85 (14.88)	110 (19.25)	120 (21.00)	160 (28.00)	220 (38.50)
Compression Set 73°F (23°C), 22 hr	D395	%	34	23	24	22	30
Melt Flow Rate (190°C/2.16 kg)	D1238	g/10 min	10.0	1.5	1.0	1.5	1.0

Revised May 2019

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon conditions that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchaser assumes all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or by others. There is no warranty of merchantability and there are no other warranties for the products described. For detailed Product Stewardship information, please contact us. Any product of Teknor Apex, including product names, shall not be used or tested in any medical or food contact application without the prior written acknowledgment of Teknor Apex as to the intended use. Please note that some products may not be available in one or more countries.

Monprene® OM-19400 Series

Overmolding TPEs designed to adhere to PC, ABS, PC/ABS, CoPE (e.g., Tritan™), PET, PBT, PMMA, PSA, ASA, SAN, POM, and more

Features & Attributes

- Dry haptics
- General purpose

Regulatory

- REACH-SVHC and RoHS compliant
- FDA compliant grades for food contact are available upon request

Typical Properties	ASTM Test Method	Units	OM-19440	OM-19450	OM-19460	OM-19470
Color	—	—	Natural	Natural	Natural	Natural
Specific Gravity	D792	—	1.05	1.10	1.15	1.21
Hardness (5s delay)	D2240	Shore A	40	50	60	70
100% Modulus	D412	psi (MPa)	95 (0.66)	150 (1.03)	270 (1.86)	370 (2.55)
Tensile Strength	D412	psi (MPa)	420 (2.90)	600 (4.14)	550 (3.79)	760 (5.24)
Elongation	D412	%	680	720	600	670
Tear Strength (Die C, 20 in/min)	D624	lbf/in (kN/m)	100 (17.50)	140 (24.50)	140 (24.50)	180 (31.50)
Compression Set 73°F (23°C), 22 hr	D395	%	30	25	27	32
Melt Flow Rate (200°C/5.0 kg)	D1238	g/10 min	27.0	25.0	3.0	5.0

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Monprene® OM-19100 Series

Overmolding TPEs designed to adhere to PA (Nylon)

Features & Attributes

- Dry haptics
- Low compression set

Regulatory

- REACH-SVHC and RoHS compliant
- FDA compliant grades for food contact are available upon request

Typical Properties	ASTM Test Method	Units	OM-19140	OM-19150	OM-19160	OM-19170
Color	—	—	Natural	Natural	Natural	Natural
Specific Gravity	D792	—	1.08	1.08	1.09	1.08
Hardness (5s delay)	D2240	Shore A	38	50	60	70
100% Modulus	D412	psi (MPa)	160 (1.10)	225 (1.55)	295 (2.03)	360 (2.48)
Tensile Strength	D412	psi (MPa)	440 (3.03)	620 (4.27)	790 (5.45)	1000 (6.89)
Elongation	D412	%	390	470	480	570
Tear Strength (Die C, 20 in/min)	D624	lbf/in (kN/m)	90 (15.75)	125 (21.88)	150 (26.25)	190 (33.25)
Compression Set 73°F (23°C), 22 hr	D395	%	10	13	16	19
Melt Flow Rate (200°C/5.0 kg)	D1238	g/10 min	1.5	3.5	4.0	10.0

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Monprene® OM-19100V Series

Overmolding TPVs (EPDM+PP) designed to adhere to PA (Nylon)

Features & Attributes

- Low compression set
- Improved chemical resistance

Regulatory

- REACH-SVHC and RoHS compliant

Typical Properties	ASTM Test Method	Units	OM-19165V	OM-19175V	OM-19140DV
Color	—	—	Natural	Natural	Natural
Specific Gravity	D792	—	0.94	0.95	0.94
Hardness (5s delay)	D2240	Shore A or D	65A	75A	40D
100% Modulus	D412	psi (MPa)	340 (2.34)	525 (3.62)	1395 (9.62)
Tensile Strength	D412	psi (MPa)	445 (3.07)	720 (4.96)	1525 (10.51)
Elongation	D412	%	200	250	250
Tear Strength (Die C, 20 in/min)	D624	lbf/in (kN/m)	95 (16.63)	160 (28.00)	370 (64.75)
Compression Set 73°F (23°C), 22 hr	D395	%	22	28	—
Melt Flow Rate (190°C/2.16 kg)	D1238	g/10 min	3.0	2.0	5.0

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Global Supply, Local Support

The Monprene® OM series is formulated to adhere to these engineering resins, and many more:

- PC, ABS, PC/ABS Blends
- Polyamide (Nylon 6, 66, 12, etc.)
- Polystyrene (GPPS, HIPS, blends)
- Polyacrylate (PMMA, MBS, ASA, etc.)
- Copolyester (Tritan™)
- POM (Polyoxymethylene/polyacetal)
- SAN (Styrene acrylonitrile)
- PBT (Polybutylene terephthalate)

About Teknor Apex

Founded in 1924 and still privately held, Teknor Apex Company is one of the world's leading custom compounders of plastics. Teknor Apex produces flexible and rigid vinyl, thermoplastic elastomers, engineering thermoplastics, color masterbatches, specialty chemicals and garden hoses. The company is headquartered in Pawtucket, RI, U.S.A. and operates thirteen manufacturing facilities worldwide in the United States, Belgium, Germany, China and Singapore.

To learn more, visit www.teknorapex.com



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