

EVOPRENE™ HP Thermoplastic Elastomer (TPE) Compounds

A range of high performance TPE compounds based on hydrogenated styrene block copolymer (H-SBC) specially formulated for applications requiring high strength and excellent abrasion resistance. Two ranges are offered, unfilled and filled. The unfilled versions offer the best properties with filled versions available as lower cost options. Tensile strength for both types is mostly over 25% higher than comparable unfilled SEBS type compounds whilst DIN abrasion for all but the softest grades is two to three times better. The characteristic good compression set, heat ageing and low temperature properties are maintained whilst high levels of UV stability can be achieved with the correct choice of the appropriate masterbatch. For details please refer to our Evoprene™ General Information brochure



This range also has good recovery properties over a wide temperature range as measured by compression set. All except the very soft compounds have excellent resistance to a wide range of acids, alkalis, alcohol and hot water. This ensures these compounds are an excellent choice for a wide range of exterior applications in many demanding environments

FOOD CONTACT APPLICATIONS

With the appropriate stabiliser package, Evoprene™ HP compounds can be used in food contact applications requiring approved ingredients according to EU or FDA regulations. It is the responsibility of the end-user to ensure appropriate tests such as global migration are carried out to ensure suitability. For full details please refer to our General Information Brochure

Evoprene™ HP Summary

- Suitable for use across a broad service temperature range from -60 to +125°C (-75 to +255°F)
- Excellent weatherability when fully stabilized, even in light colours
- Excellent resistance to a broad range of acids, alkalis, alcohol and hot water
- Good recovery properties over a broad temperature range
- Can be formulated for food contact applications
- Easy processing on standard thermoplastics equipment
- Fully recyclable at all stages
- Compatible with PP for co-moulding or co-extrusion
- Readily coloured with PE masterbatch

Need more information? Visit www.alphagary.com or send us an email at enquiries@alphagary.com or call:

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Additional Information about:

- Material Selection
- Processing
- Mould Shrinkage
- Chemical Resistance
- Packaging & Labeling

AlphaGary
Evoprene™
25 Years of
Know-How!

can be obtained by visiting www.alphagary.com, emailing us at enquiries@alphagary.com, or contacting one of our offices

EVOPRENE™ HP SERIES

Over the years, we have created hundreds of formulations – here are some of our most popular materials. Please feel free to contact us for assistance in product selection. We enjoy being involved!

Units Test Method	Hardness Shore A ISO 868	Specific Gravity g/cm ² ISO 2782	M/S Flow Kg/cm ² AG	Tensile Strength MPa ISO 37	Elongation @ Break % ISO 37	Modulus MPa			Tear Strength KN/m ISO 34-B	Compression Set			Abrasion Resistance mm ³ DIN 53516
						100 %	200 %	300 %		72h 22C %	22h 70C %	22h100C %	
						ISO 37				ISO 815	ISO 815	ISO 815	
Evoprene HP 3702	40	0.89	9	5.5	660	0.5	1.8	2.2	26	22	35	49	178
Evoprene HP 3704	50	0.89	19	9.4	580	1.8	2.5	3.0	41	21	35	46	60
Evoprene HP 3706	60	0.89	20	9.5	545	1.9	2.6	3.4	44	22	35	48	52
Evoprene HP 3708	70	0.89	19	13.0	615	2.4	3.1	4.0	49	28	41	55	54
Evoprene HP 3710	80	0.89	14	19.8	765	4.3	5.0	5.9	69	35	50	62	63
Evoprene HP 3712	90	0.90	14	19.5	740	4.3	5.0	5.6	70	31	47	60	62
Evoprene HP 3722	40	0.94	9	6.0	660	1.3	1.7	2.1	24	20	33	46	240
Evoprene HP 3724	50	0.96	20	8.7	520	2.0	2.8	3.9	38	18	34	45	110
Evoprene HP 3726	60	0.98	24	9.3	430	2.2	3.1	4.2	43	24	35	50	120
Evoprene HP 3728	70	0.98	18	13.4	585	2.7	3.5	4.5	48	27	40	52	90
Evoprene HP 3730	80	0.98	16	17.8	765	3.8	4.4	5.3	61	36	46	62	94
Evoprene HP 3732	90	0.96	15	22.0	655	5.3	6.0	7.3	75	35	50	65	85

COMPARISON WITH TPU

Harder Evoprene™ HP grades, with improved abrasion resistance and higher tensile strength compared to regular SEBS grades, can be used in some applications where TPU would normally be specified. Evoprene™ HP grades have very good heat ageing properties, excellent hydrolysis resistance and, when properly protected, very good antimicrobial resistance

	TPU – typical values for different types									Evoprene™ HP		
	ESTER			ETHER			ETHER / ESTER			3708	3710	3712
	Shore A	70	85	90	70	80	90	80	90	H-SBC	H-SBC	H-SBC
Hardness	Shore A	70	85	90	70	80	90	80	90	70	80	90
S.G.		1.15	1.20	1.21	1.06	1.11	1.15	1.20	1.15	0.89	0.89	0.89
Tensile Strength	MPa	25	40	45	25	40	40	28	30	13	20	20
Elongation @ break	%	800	450	500	800	500	630	570	500	610	760	740
Modulus @ 100%	MPa	3	6	15	2	5	8	4	6	2	4	4
Modulus @ 300%	MPa	5	17	30	4	9	15	9	11	4	6	6
Tear Strength	KN/m	36	70	80	39	50	85	55	55	49	69	70
Compression Set												
70 hr @ 22°C	%	24	30	20	22	20	20	20	30	28	35	31
22 hr @ 70°C	%	52	55	50	49	40	40	50	65	41	50	47
Abrasion Loss	mm ³	50	30	27	69	20	20	70	60	54	63	62
Hydrolysis Resistance		Good	Good	Good	V.Good	V.Good	V.Good	Good	Good	Excellent	Excellent	Excellent
Microbial Resistance		Moderate	Moderate	Moderate	V.Good	V.Good	V.Good	Good	Good	V.Good*	V.Good*	V.Good*

* when protected with antimicrobial package which can be specified as e.g. Natural 8414 or Black 8308

This information is intended for general guidance only and may contain information which could be inappropriate under particular conditions of application or use. Each customer or user must conduct its own studies to check for suitability for the intended end use.