

# INJECTION MOLDED SOFT SKIN

## FOR AUTOMOTIVE INTERIORS



The latest generation TPE polymer chemistry meets soft-touch haptics and vehicle weight savings while using a preferred conversion method: injection molding.

Kraton™ Injection Molding Soft Skin (IMSS) technology enables the injection molding of large, thin-walled soft skin parts, including instrument panel skins as thin as 0.8mm. Kraton IMSS can be used on standard equipment and under normal processing conditions, using both skin-only and over-molded injection molding processes.

The IMSS product's foundation is the use of Kraton™ TPE technologies and product support from Kraton's technical team, the backbone of this new innovation. IMSS includes many performance benefits such as very high flow properties for thin-wall molding; excellent cold temperature flexibility, even after long-term heat aging and weatherometer testing; aesthetically-acceptable soft surface without the need for painting; and minimal plasticizer loading, resulting in globally-acceptable VOC and odor performance.

Kraton IMSS products look and feel great in applications such as instrument panels, trim panels and center consoles. It also supports environmentally-responsible initiatives like vehicle lightweighting and recyclability with the ability to reuse scrap and production trim waste.

### FEATURES

- Injection moldable soft skin solution
- New high melt flow (200 MFR) Kraton SEBS-based TPE technology
- Lower density than current materials
- Improved abrasion resistance/durability
- Cold temperature flexibility
- Enables soft touch haptics
- No cross linking, phthalate free\* and low plasticizer content
- Very low oil content, resulting in consistent matte gloss and no visible weld lines on grained class "A" surfaces

(\* ) Based on our knowledge of the product composition and manufacturing process of our polymers, Phthalates are not intentionally added as part of the manufacturing process nor do we routinely analyze for these substances.

### BENEFITS

- System level cost savings (IM vs. Slush)
- Enables the ability to injection mold large thin-walled parts
- Enables vehicle weight savings
- No coating required to meet OEM specifications
- Safe airbag deployment
- Improved perceived quality
- Improved aging, fogging, VOC and odor performance
- Meets OEM performance specification without the need for painting of the class "A" surface

Properties	Method	Kraton™ IMSS TPE	PVC	TPO
Shore A Hardness (15 sec)	ASTM D2240	70 80	69	87
Specific Gravity (g/cm <sup>3</sup> )	ASTM D792	0.9	1.2**	0.95**
Tensile Strength (MPa)	ASTM D412	6.8 - 13.0	10.2	11.8
Elongation @ Break (%)	ASTM D412	627 - 951	469	419
Tear Strength (N/mm)	ASTM D624	27.7 - 57.4	43.3	80.9
Abrasion Resistance	CS10, 250 Cycle	No Wear	No Wear	No Wear
Scuff Resistance	SAE J365, Knife A	No Wear	No Wear	No Wear
Coefficient of Friction	ASTM D1894	0.39 - 1.0	0.84***	0.3***
MFI 190°C, 2.16Kg (g/10min)	ASTM D1238	36 - 177	--	--
MFR 230°C, 2.16Kg (g/10min)	ASTM D1238	128 - 514 <sup>a</sup>	--	--
Heat Aging (1000hrs - 120°C)	ISO 188			
Tensile Strength Change (%)	ASTM D412	-6.1 to -22.7	5.0	-10.1
Elongation Change (%)	ASTM D412	-10.1 to -20.4	5.2	-26.4
Weathering (Color Change ΔE)	FLTM BO 116-1	<1	<1	<1

\* Based on Kraton® IMSS Grades: KICH-14-044, 01237-006, -010 and MD6743  
\*\* Based on Manufacturer's Technical Data Sheet  
\*\*\* Reading taken on grained surfaced  
<sup>a</sup> MFR readings are not accurate due to low viscosity of the compound at this temperature

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