PA material for R-COMPO® (Direct bonding with rubber and TPU)

Standard thickness of the film = 0.3 mm or 0.5 mm

Property	Test Methods	Unit	DAIAMID E73K2	DAIAMID E75K2
Density	ISO1183	g/cm³	1.01	1.01
Tensile strength at yield Tensile elongation at yield Tensile strength at break Tensile elongation at break	ISO527	MPa % MPa %	36 19 53 200<	37 15 57 200<
E-Modulus (Tensile)	ISO527	MPa	930	1000
E-Modulus (Flexural)	ISO178	MPa	810	900
CHARPY impact strength	ISO179/1eU	kJ/m²	NB	NB
CHARPY-Notched impact strength	ISO179/1eA	kJ/m²	11	10
Shore D hardness	ISO868	—	72-74	74-76

Rubber for R-COMPO®

Code	Tensile Test			Tear Test		Akron Abrasion	Density	Compression Set	Hardness
				Flow direction	Transversal direction				
	Max. Strength [MPa]	Elong. at break [%]	Modulus [MPa]	Max. Strength [N/mm]	Max. Strength [N/mm]	at 1000 rotation [mm³]	[g/cm³]	[%]	Hs (A)
R0064	18.30	489	2.10	59	61	2.976	1.12	11	62
R0080	15.24	388	3.00	44	46	9.275	1.15	10	65
R0080B	16.05	342	4.06	46	47	6.377	1.15	11	68
R1028B	12.23	244	8.25	40	44	5.509	1.20	12	79

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Daicel-Evonik Ltd. was founded in 1970 as a joint venture between Evonik Industries AG, Germany,and Daicel Corporation, Japan, and has been developing and selling high-quality, high-performance polymers such as DAIAMID, VESTAMID, VESTOSINT (nylon-12) and TROGAMID (transparent nylon), alicyclic C8 and C12 dry compounds, PLEXIGLAS(PMMA), VESTAKEEP (ultra-high heat resistance resin, PEEK) By adopting new concepts and ideas, we are continually striving to improve quality and strengthen our service system so that we can deliver higher-value-added products to our customers.

R-COMPO®

Plastic + Rubber Composite Sheet

Enjoy Plastics

DAICEL EVONIK

R-COMPO®

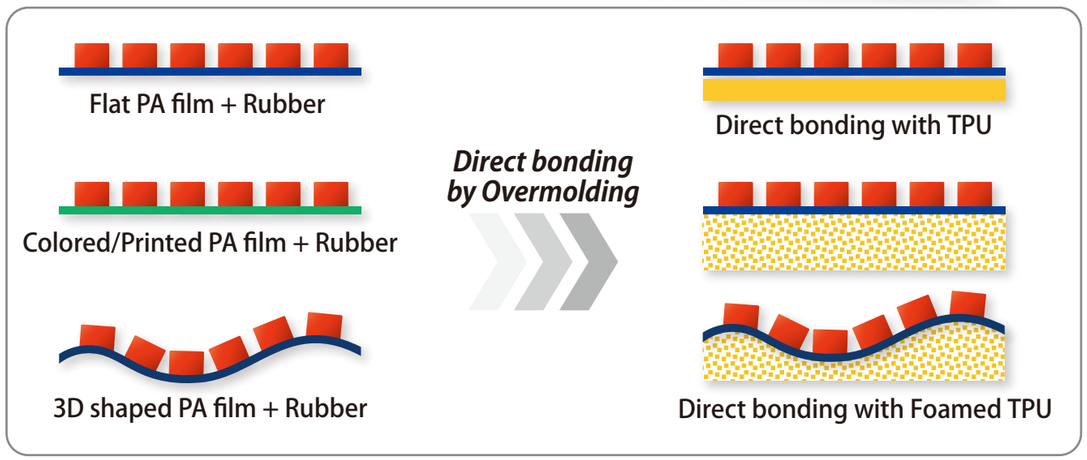
*= Plastic + Rubber **Compo**site Sheet*

Direct bonding without adhesives
➡ No Solvent emission ! = No VOC*, environmentally friendly

Rubber's grip x PA's spring

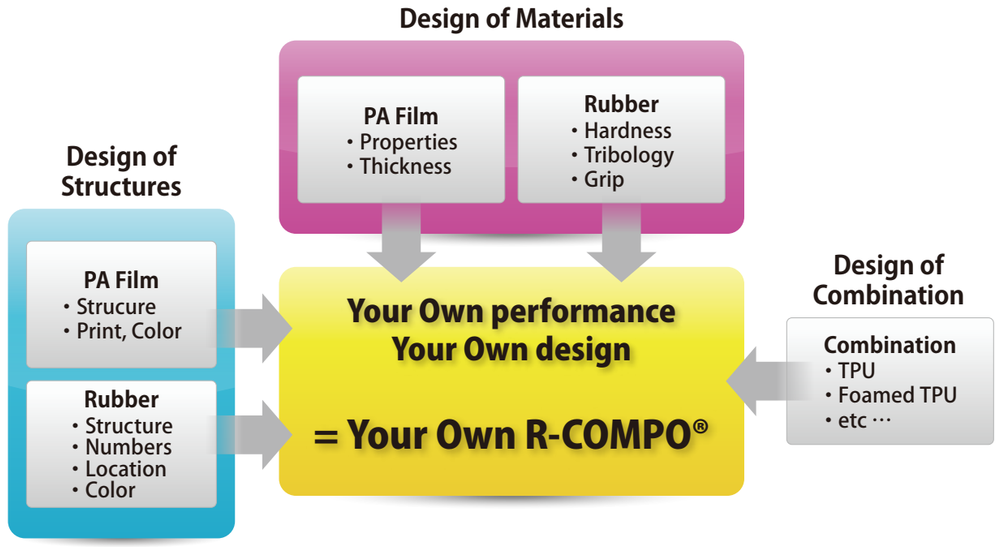
High freedom of design

R-COMPO® : Variation of Design



* VOC = Volatile Organic Compounds

Customization



Typical Grip performance

UNIT = [N]

Place	Dry Surface			Wet Surface		
	R-COMPO	Fab. + TPU	Rub. Only	R-COMPO	Fab. + TPU	Rub. Only
Art turf	11.7	10.5	9.6	8.0	6.6	6.9
Asphalt road	6.4	6.1	6.3	5.7	5.2	4.6
Ballast	4.2	3.8	3.9	5.9	5.1	5.3
Concrete	6.9	5.8	5.7	6.1	5.0	5.0
Play ground	6.5	5.7	6.2	8.5	8.2	7.4
Rubber plate	12.5	8.6	8.9	10.4	7.7	7.4
Tile floor	8.1	6.6	5.9	4.1	4.0	3.7
Wooden floor	7.5	5.8	9.4	5.8	3.2	3.7

< Specimen >
Film + EVA foam composite
* EVA foam = 9mm thick

< Method >
Loading 1 kg weight on the EVA side.

Sliding it on each places and measure the friction force with "Push-Pull machine".
Higher value means higher grip performance.

* Grip performance is directly correlated to rubber design and pattern.