

NOF[®]-ALLOY TZ series



1 About NOF[®]-ALLOY TZ Series

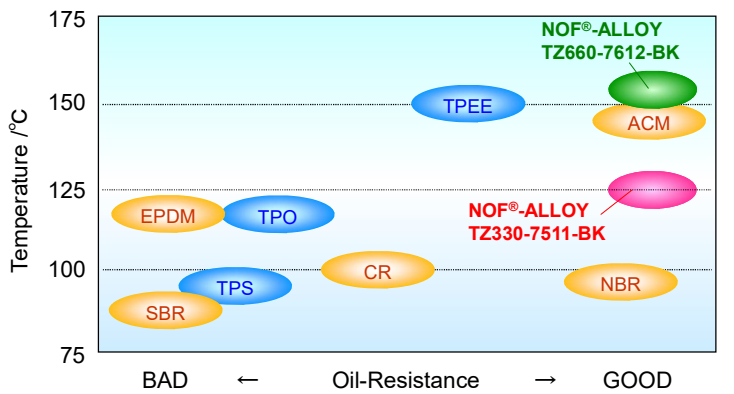
NOF[®]-ALLOY TZ Series has some excellent properties, especially oil-resistance and high heat-resistance.

NOF[®]-ALLOY TZ Series is a high-performance thermoplastic elastomer which consists of acrylic rubber and polyolefin (or polyester).

2 Features of NOF[®]-ALLOY TZ Series

① Excellent oil and heat resistance

NOF[®]-ALLOY TZ Series shows both excellent oil-resistance and high heat-resistance properties in comparison to other materials.



TPO : Thermoplastic olefin elastomer TPS : Thermoplastic styrene elastomer
 TPEE: Thermoplastic polyester elastomer EPDM: Ethylene-propylene-diene rubber
 SBR : Styrene-butadiene rubber CR : Chloroprene rubber
 NBR : Acrylonitrile-butadiene rubber ACM : Acrylic rubber

Fig.1 Comparison of Oil-resistance and Heat-resistance

3 Application of NOF[®]-ALLOY TZ Series

NOF[®]-ALLOY TZ Series has an excellent adhesive property for other resins. Due to this property, **NOF[®]-ALLOY TZ Series** can be molded with other resins by double molding method.

NOF[®]-ALLOY TZ Series is molded by some common methods (extrusion, injection, blow etc.), and used for Air ducts, Covers and Seals of automotive application. Especially **NOF[®]-ALLOY TZ Series** is a suitable material for packing, and gaskets of automotive and industrial application because of the excellent elasticity.

② Excellent adhesion property

NOF[®]-ALLOY TZ Series has an excellent adhesive property for other resins.

Table 1 Adhesion for resins

Resin	NOF [®] -ALLOY TZ330-7511-BK	NOF [®] -ALLOY TZ660-7612-BK
PP	Adhesive	No Adhesive
ABS	No Adhesive	Adhesive
PC	No Adhesive	Adhesive
PC/ABS	No Adhesive	Adhesive
PBT	No Adhesive	Adhesive

(Evaluation method)

1. The other resin plate is set into a cavity of the mold.
2. NOF[®]-ALLOY is molded toward the plate by injection method.
3. The adhesion property of the interface between NOF[®]-ALLOY TZ and other resins is checked by peeling.

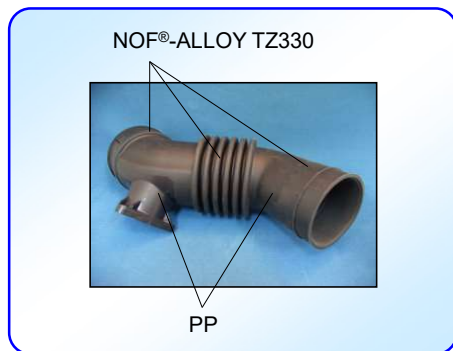


Fig.2 Double molding

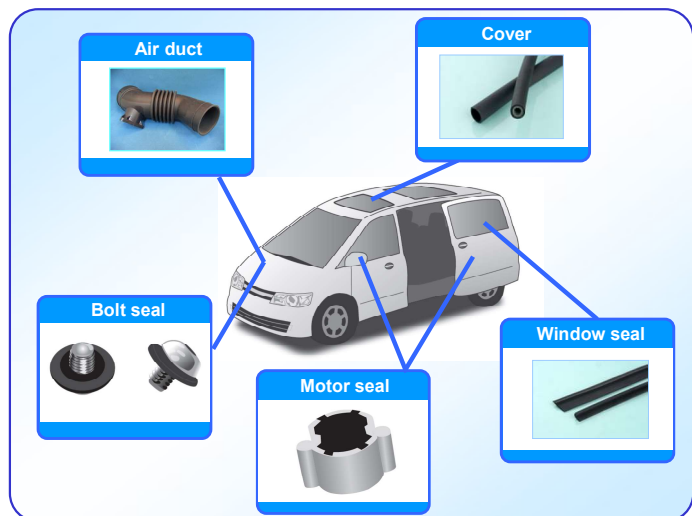


Fig.3 Application of NOF[®]-ALLOY TZ Series

4 Physical properties of NOF[®]-ALLOY TZ Series

The physical properties of **NOF[®]-ALLOY TZ Series** are shown in Table 2.

Table 2 The physical properties of NOF[®]-ALLOY TZ Series

Item	Test method	Unit	Normal grade	High heat-resistance grade	
			NOF [®] -ALLOY TZ330-7511-BK	NOF [®] -ALLOY TZ660-7612-BK	
Physical properties	Density	ASTM D 792	—	1.00	1.13
	Melt flow rate ¹⁾	ASTM D 1238	g/10min	8	3
	Hardness ²⁾	ASTM D 2240	—	A75	A79
Mechanical properties	Strength at break ³⁾	ASTM D 412	MPa	4	7
	Elongation at break ³⁾		%	200	200
	100% Modulus ³⁾		MPa	3	5
Thermal property	Brittleness temperature	ASTM D 746	°C	-45	-47
Property like rubber	Compression set ⁴⁾	ASTM D 395	%	50	49
Oil resistance	Ratio of weight change ⁵⁾	ASTM D 471	%	15	3
Melting point			°C	155	225
Available temperature range			°C	-40~120	-40~150

1) TZ330; 190°C×5kg, TZ660; 260°C×10kg, 2) 15 seconds later, 3) Number 3 dumbbell shaped specimen, elongation rate; 500mm/min

4) TZ330; 120°C×24h, 25% compression, TZ660; 150°C×24h, 25% compression 5) IRM903 oil (TZ330; 120°C×72h, TZ660; 150°C×72h)

* The values in the table are typical values and not verified values.

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