

Taipol[®] SEBS Foaming Material T-BLEND[®] 4000N-FM is a TPR composite pellet with excellent elasticity and recovery properties. T-BLEND[®] 4000N-FM can make high foaming materials with much better properties than EVA foams and similar to PU foams. The physical properties of T-BLEND[®] 4000N-FM pellets with higher SEBS content are comparable to those of CR, EPDM and SBR rubber foams. However, its lack of odor and simple recipe makes it far superior to traditional rubber foams.

T-BLEND[®] 4000N-FM is highly compatible with most types of rubber and plastic. It is an elastomer, and it can be used in cross-linking EVA or rubber products as a modifying compound with flexibility, anti-slip and wear-resistance. It can act as a substitute for Engage and EPDM, used in the mixture of EVA foam. The process for manufacturing is easy, that you don't have to make changes to the processing machines and the processing methods.

T-BLEND[®] 4000N-FM is designed for many flexible or semi-flexible foams application such as Sporting goods, Foam floor mats, Sports applications, Shoes (insole·midsole·outsole), Speaker edges, Diving wear, Baby carriage wheels, Modification of EVA Foams...etc..

The physical properties of foamed T-BLEND[®] 4000N-FM are more excellent than EVA foamed materials, it has some unique characteristics which EVA foamed materials don't have. such as Higher elasticity, Better compression Set, Higher flexibility, Softer touch, Better low temperature properties, Lower shrinkage, Better weatherability, Better abrasion resistance, Better anti-slip properties.

Being a modifier for EVA foamed materials, T-BLEND[®] 4000N-FM can be added 10~50% to EVA mixtures which depends on what properties the customer's need.

Properties(Before Foamed)

Characteristics	Methods	Typical values
Product Form	NA	Pellets
Colour	NA	Natural
Specific Gravity	ASTM D 792	1.04
Hardness (Injection Test Piece, Shore A)	ASTM D 2240	40±2
Tensile Strength at Break (kg/cm ²)	ASTM D 412	16.0
Elongation at Break (%)	ASTM D 412	380
Modulus at 300% (kg/cm ²)	ASTM D 412	15

Tear strength (C Die,kg/cm)	ASTM D 624	40
Melt Flow Index 5 kg @ 180°C	ASTM D 1238	6.3
Rebound (%)	ASTM D 1054	53.6

Properties(After Foamed)

Characteristics	Methods	Typical values
Specific Gravity	ASTM D 792	0.12
Hardness (Injection Test Piece, Shore C)	ASTM D 2240	8±2
Tensile Strength at Break (kg/cm ²)	ASTM D 412	6.6
Elongation at Break (%)	ASTM D 412	400
Tear strength (500mm/min,kg/cm)	ASTM D 624	2.7
Compression Set (50°C*5hrs ,%)	CNS-3560	6.3
Shrinkage(70°C*40 min ,%)		-2.33
Resilience (@23°C, %)	ASTM D1894	58

Processing Guide

T-BLEND[®] 4000N-FM pellets won't absorb moisture from air in suitable stock condition, but if the stock warehouse with higher moisture. Please pre dry the pellets @ 50°C *2-4hrs before processed.

Suggested Processing Conditions:

Basic formulation:

Materials	Parts(phr)
T-BLEND [®] 4000N-FM	100
DCP	0.7~0.8
AC	3.0
ZnO	1.0
ZnSt	0.5
PL-400	0.5
S.A	0.5

The processing methods T-BLEND[®] 4000N-FM included Compression molding of foams, Extrusion of foams and Injection molding of foams using expandable pellets. In general, we can mix all materials by roller or kneader at about 80°C , then added DCP/AC at about 90°C, after mixed well ,sheeting out at about 110°C,and let it cool down more than 8hrs.

The compression molding condition is about 15min@165°C.

Precaution in handling and storing

T-BLEND[®] 4000N-FM rubber pellets present no unusual handling problems, thus normal procedures for handling solids that might form a dust should be followed.