

T-BLEND®2592N-SP is a pre-formulated and pelletized thermoplastic elastomer compound based on styrenic block copolymer.

Thanks to its high strength. It is designed for the injection molding of non-toxic toy components and infant product parts with improved tear and torque resistance.

Being a thermoplastic elastomer, T-BLEND®2592N-SP can be easily processed with general processing equipment and tools designed for thermoplastics and yet possess elastomeric properties at ambient temperatures.

## Properties

Characteristics	Methods	Typical values
Product Form	NA	Pellets
Colour	NA	Translucent
Specific Gravity	ASTM D 792	0.88
Hardness (Injection Test Piece, Shore A)	ASTM D 2240	25 ± 3
Tensile Strength at Break (kg/cm <sup>2</sup> )	ASTM D 412	33.1
Elongation at Break (%)	ASTM D 412	286
Tear Strength at Break (kg/cm)	ASTM D 624	11.7
Melt Flow Index 5KG@180°C	ASTM D 1238	15
Rebound (%)	ASTM D 1054	55.8

## Processing Guide

T-BLEND®2592N-SP rubber is a versatile material and can be processed by using high shear rate injection molding methods.

T-BLEND®2592N-SP is excellent at normal processing temperatures. However should inadvertent loss of temperature control

lead to decomposition the degradation products are non-corrosive. Generally, it reacts the same as other easy molding thermoplastics, such as polystyrenes. The finished parts have sharp and well defined details.

Typical starting conditions for a reciprocating screw injection molding machine are listed in the accompanying chart.

These values are intended only as guidelines, and the optimum conditions will vary from machine to machine.

Typical mold shrinkage for T-BLEND®2592N-SP is between 0.020-0.025 inch/inch. Short cycle time can be achieved and the scrap is 20% recyclable without loss in properties.

LDPE or EVA colour concentrates can be used to colour T-BLEND®2592N-SP.

Suggested Processing Conditions	
Barrel temperature	
Feed	95°C
Rear	175°C
Front	185°C
Nozzle	190°C
Mold temperature	30-40°C
Back pressure	3.5-50 kg/cm <sup>2</sup>
Injection rate	Moderate
Cycle time	25 – 40 sec

( 1kg/cm<sup>2</sup> = 14.223 psi)

## Precaution in handling and storing

T-BLEND®2592N-SP rubber pellets present no unusual handling problems, thus normal procedures for handling solids that might form a dust should be followed .

### Non-Toxicity Declaration

This formulation is composed of TSRC, extender and additives known to manufacturer as food-contact and generally recognized as safe materials.

This compound does not contain chemicals listed below and is free from VCM, halogen and heavy metals.

Bisphenol A	1,3 Diphenylpropane
Cis-1,2-Diphenyl cyclobutane	trans-1,2-Diphenyl cyclobutane
2,4-Diphenyl-1-butene	2,4,6-Triphenyl-1-hexene
1a-Phsnyl-4a-(1'phenylthyl) tetralin	1a-phenyl-4e-(1'-phenylethyl) tetralin
1e-Phsny1-4a-(1'phenylthyl) tetralin	1a-Phenyl-4e-(1'-phenylethyl) tetralin
1e,3e,5a-Triphenylcylohexane	1e,3e,5e-Triphenylcylohexane
Di(2-ethylhexyl)adipate	Di(2-ethylhexyl)phthalate
Di-n-butyl phthalate	Benzyl n-butyl phthalate
n-Butyl benzyl phthalate	Di-n-propyl phthalate
Dipentyl phthalate	Di-cyclohexyl phthalate
Tributyltin chloride(TBTC)	

This compound may contain Tris-nonyl-phenyl phosphite(TNPP) as stabilizer/anti-oxidant system in one of the polymer used.

Upon performing its function as a stabilizer it, if present, reacts with oxygen releasing

nonylphenol that may migrate out of the polymer and the residual nonylphenol content in the polymers should not exceed 300 ppm. Determination of migration of nonylphenol content in the polymer has shown that the level of migration is well below regulatory limits in the USA and European Union.

Whilst it is theoretically possible that low molecular weight styrene oligomers (styrene dimers, and etc.) may also be present in this compound, the levels are known to be so low that migration into substrates would not be detectable. Work on polystyrene itself has shown clearly that even where the presence of oligomers is significant, oestrogenic effects have not been observed in animal tests.

To most people, the material should have low smell and no taste.

Under proper storage and handling the uncontaminated material should not cause any irritation to human skin and eyes. It should not generate or decompose into hazardous substances when processed or within recommended temperature range.

It is our advice that fabricators using this compound should conduct their own tests to confirm product suitability in meeting requirements for food-contact or mouth-contact applications.