



NORTH SHORE RUBBER

Technical Data Sheet TDP-B Tire-Derived Polymer Product Code 0494

TDP-B (Tire-Derived Polymer) is a highly devulcanized rubber masterbatch compound made from truck tires or truck tread. It is a versatile, functional material that offers significantly higher performance to differentiate it from fillers such as crumb rubber, micronized rubber powder, or reclaimed rubber.

TDP-B is intended to be used as a **polymer replacement**, and can be used to displace virgin rubber, SBR, EPDM, prime or recycled grade polypropylene (PP), high-density polyethylene (HDPE) and nylons.

TDP-B is used in the automotive, industrial, construction and consumer products markets.

Application Examples	Typical Loading
New Tires: Tread & Sidewall	15-25%
Retreaded Tires: Truck & OTR	15-30%
Conveyor Belts & Material Handling	20-45%

Molding Applications	
Automotive Parts	20-50%
Shoe Soles	30-70%

Loading levels vary depending on quality requirements and specifications.

Typical Properties:

Properties can be optimized on an individual basis. Changes in processing conditions or cure will result in different properties.

Property	ASTM	Typical Value	Range
Mooney Viscosity (1+4 @ 212F)	D1646	45	+/- 20
Hardness, Shore A	D2240	58	+/- 3
Density, g/cm ³	D297	1.14	+/- 0.03
Physical Properties	D412, 20"/min		
Tensile, psi (MPa)		1450 (10)	+/- 145
Elongation at break, %		270	+/- 30
Stress at 100% strain, psi (MPa)		330 (2.3)	
Tear, lb/in (N/mm)	D624, die C	200 (35)	
Flexometer	D623		
Hysteresis, °C		25	
Blow-out Minutes		3.5	
Abrasion, mm ³	D5963	160	
Schob Rebound, %	D7121	35	

No solvents or chemicals are used in the process of making TDP-B.

Cure:

Typical values are shown produced from IS6306-1971 standard cure package.

Ingredients	Grams
Tire-Derived Polymer (TDP-B)	200
Zinc Oxide	5.0
Stearic Acid	2.0
Sulfur	3.0
2-Mercaptobenzothiazole (MBT)	0.5
Diphenyl guanidine (DPG)	0.2

Composition:

The composition of TDP-B will mirror that of the feedstock used to create it. The typical North American truck tire composition is shown below.

Ingredient	%	Range
Natural Rubber (NR)	37	+/- 3
Synthetic Rubber (SBR)	20	+/- 3
Total Polymer Content	57	+/- 3
Carbon Black	27	+/- 3
Ash	7	+/- 2
Acetone Extract	9	+/- 2

Questions? Contact info@northshorerubber.com

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