

Northstar Elastomers

Norst® Polymers & Tirecycle™ Rubbers

Technical Data Sheet

Product Name: Tirecycle™ T 608

Classification: Proprietary 100% solids Adhesive Rubber

Applications: *Tirecycle™* is an *advanced material* based on rubber crumb. It is added to SBR, NR, EPDM or other rubber compounds to enhance both their performance and our environment. The basic formulation uses #34 to infinity mesh crumb. We can formulate it with 60/80 mesh crumb, 15/20 mesh, or other mesh sizes.

Products: Tires - car, truck, forklift
Shoe soles
Hose - garden, etc
Mats, Grommets, Polypropylene molds

Typical Usage: Add *Tirecycle™* to SBR, NR, EPDM or Polypropylene compounds, generally at ratio of 30-50% *Tirecycle™*, as a *direct replacement for that portion of the compounds*. *Tirecycle™* portion may be up to 75-100% for some uses.

Compatible Host Compounds: Black color
Durometer from 65-75
NR, SBR or EPDM base, blends can be very good
Compounds that need or are able to process at higher viscosity levels, like those used for compression mold-transfer or injection molding are best when body fed into cavity.

Color: Black. Other colors may be available for some compounds.

Packaging: Bagged in 45 lb low-melt bags in corrugated boxes, or
Sized for your Banbury batch
Available in 2,000 lb bags for bulk use

Benefits with Tirecycle™:

Lower cost
Allows crumb to be part of the compound rather than just filler (which generally is a small percentage)
Improve pavement adhesion and mileage in tires
Hysteresis (Tan Delta) decrease
Cure time decrease
Die swell decrease
Viscosity increase
Resilience increase
Modulus increase
Compression set decreases at room temperature (other temps should be tested)
When using high percentages of crumb, the physical size of one lb of rubber compound is greater than without crumb.
May recycle your waste rubber in Tirecycle™ for re-use

Drawbacks with Tirecycle™:

Some benefits may be detriments in certain uses
Green strength decrease
Elongation decrease
Smoothness and tack decrease with higher percentages
Scorch time slight decrease (depends on compound)

Mixing:

Tirecycle™ can be mixed with your compound in your Banbury. The required order of loading is to add compound then ***Tirecycle™***. Over 300° F can damage the crumb.

EPDM requires NorthStar Elastomers test your compound with our T 608 EPDM for proper ratios. We will need your desired tensiles, duro and modulus.

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USE ONLY WITH APPROVED EQUIPMENT***

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