

# Northstar Elastomers

## Custom Polymer Solutions

### Product Data Sheet

<b><u>Product Name:</u></b>	<b>TC-1302 – TireCycle®</b>
<b><u>Classification:</u></b>	Proprietary 100% solids Rubber Adhesive
<b><u>Applications:</u></b>	<i>TireCycle®</i> (treated rubber crumb) is added to SBR, NR, EPDM or other rubber compounds. 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.
<b><u>Typical Usage:</u></b>	Add <i>TireCycle</i> to SBR, NR, or EPDM compounds, generally at ratio of 30-50% <i>TireCycle</i> , as a direct replacement for that portion of the compounds. <i>TireCycle</i> portion may be up to 75-100% for some uses.
<b><u>Compatible Host Compounds:</u></b>	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.
<b><u>Benefits with TireCycle:</u></b>	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 Cure time 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 be able to recycle your waste rubber into <i>TireCycle</i> for re-use

**Drawbacks with TireCycle:** Viscosity increase  
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 TC-1302 EPDM for proper ratios. We will need your desired tensiles, duro and modulus.

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

**Packaging:** Bagged in low-melt bags sized for your Banbury batch  
Available in 2,000 lb bags for bulk use